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THE JOURNAL

— OF THE —

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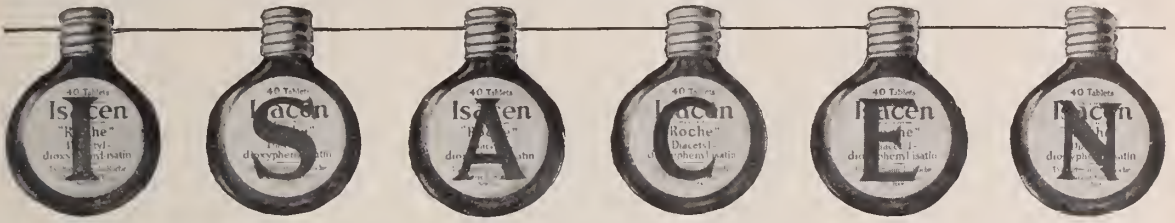
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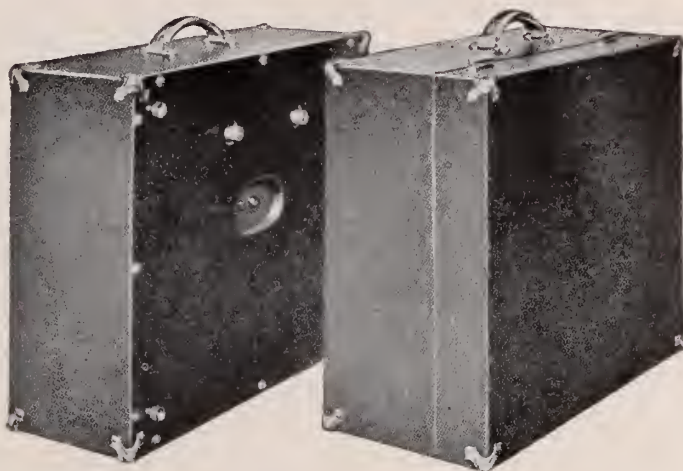
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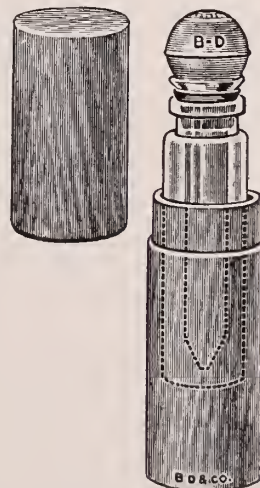
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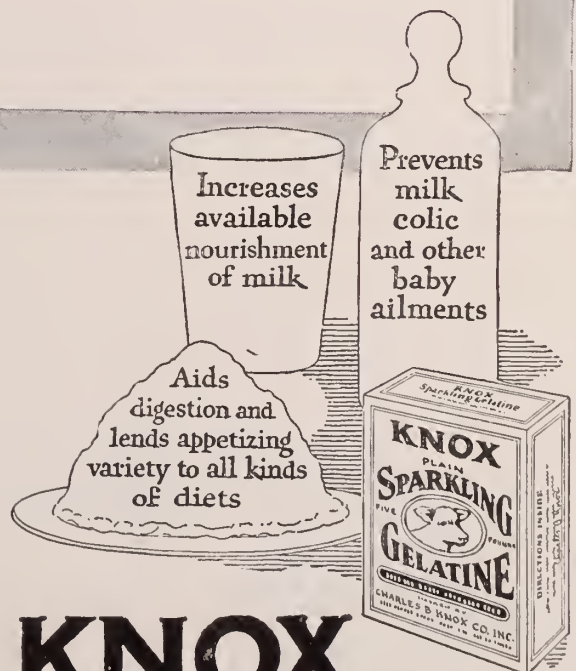
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XIV

Jacksonville, Florida, July, 1927

Number 1

THE AMERICAN MEDICAL ASSOCIATION*

PHILIP MARVEL, M.D.,
Atlantic City, N. J.

Mr. President and Members of the Duval County Medical Society:

At the suggestion of my friend, Dr. Taylor, and the courteous invitation of your President, I have consented to speak to you this evening on the subject of the reorganization of the American Medical Association.

In the first place, may I say, I appreciate this opportunity to speak to you briefly on this subject, as it seems to be one not so well understood by the membership of the average component society, as it should be. Perhaps it will be of interest to some of you, more particularly the younger members present, if brief reference be made to the early history of the National Medical Association, before the reorganization. Previous to the year 1850, and back in the early 40's Dr. Nathaniel Davis, then of New York State and later of Chicago, Ill.; Dr. Charles Stillé of Philadelphia, Pa.; Dr. Austin Flint of New York, N. Y., and other representative physicians of the Middle Atlantic, Eastern and New England States, at the call of Dr. Davis, held conferences from time to time, which subsequently, by resolution passed, led to the organization of what is now known as the American Medical Association. This organization held its meetings annually until during the War 1861-1864, when they were discontinued, but after which they were again resumed and have continued annually up to the present day. The growth of the organization was slow until the beginning of the early 90's and soon after which the reorganization became a necessity. In the years 1898 to 1900 plans and provisions were made and prescribed that led to, and assured the reorganization; since which time the advance and influence of the Association has been remarkable when compared with its previous growth. Were I to attempt to place the credit for the reorganization, it would necessarily be divided among a number of the then influential physicians and

surgeons, who were members of the Association at that time, but to no one could I give greater credit than to Drs. George H. Simmons, Secretary, Editor and Manager of the A. M. A., at the time, and to J. N. McCormack of Bowling Green, Ky. These two men were untiring in their efforts to promote and bring about what they and many others believed necessary, to attain such changes as would better meet the growing demands of the profession and the greater development of public health. Prior to the beginning of 1900 the growth of the Association—its medical and civic influences—had not been altogether satisfactory; its membership previous to that date was small, numbering but a few thousand, with little or no property investments to its credit. It is scarcely necessary to dwell upon the differences in the government of the Association in its preorganized period as compared with that since the reorganization, except to state that the organic law and requirements of the latter differ very considerably from that of the former. The legislative power of the former organization was vested in a membership body representing county, state and other recognized medical bodies, the functioning of which entitled them to accredited standing, while with the latter its fundamental strength is vested principally in the county medical society, or the so-called component medical society. The membership of this society is determined by the organic law regulating and governing the same, and admits only licensed physicians within the county, who are in good standing and acceptable to the same. There are, however, provisions made for the admission of associate members from various other allied medical and health bodies, such as dentists, pharmacologists, sanitary engineers, etc. The state medical societies are composed of delegates elected by the county or component societies and Association members or Fellows. The number of delegates representative of any county society is determined by the said society's membership, it being entitled to one delegate for every fifty (50) members or fraction thereof. The A. M. A. in like manner is composed of delegates elected by the state societies with Fellows, Associate Members

*Read before the Duval County Medical Society.

and Honorary Fellows. The delegates elected by the several state societies together compose the legislative body of the American Medical Association and are determined by the membership of the state societies, each society being entitled to a delegate for every 500 members or fraction thereof. The number of delegates is limited to 150. A provision is made, however, whereby a reapportionment can be made every third year. In addition to the delegates elected by the state medical societies, the medical departments of the Army, Navy and Public Health Service of the Federal Government are represented in the House of Delegates of the A. M. A. by one delegate from each of these bodies. The House of Delegates is further augmented by one delegate elected by and representative of each scientific section, and a delegate from each of the colonial possessions of the United States, *i. e.*, Porto Rico, Hawaii, Philippine Islands, etc., and it is my impression that the voting privileges of the former are restricted to matters and problems that concern scientific and medical interests. Owing to the fact that the organic law of the earlier organization was so liberal in the selection of its membership, the delegated body was sensitive and responsive to varied interests in the association. It was, therefore, obvious that no sort of concentrated action could be directed by its officers or House of Delegates towards undetermined problems of scientific importance without brooking opposition from self-interested and disturbing angles.

It is likewise obvious that with these different interests there arose, annually, demands that were not always for the best interests of the profession or the greater problems of public health. These were some of the reasons for the reorganization.

With this very brief and imperfect picture of what our National Association was but a little more than a quarter of a century ago, I now proceed to speak more particularly of our present organization and its many interests as they exist today:

Before entering into the discussion of its various divisions and problems, I deem it not out of the way to emphasize the fact that the object of the organization is twofold: First, to advance medical science and the art of medicine, and second, to prevent disease. In a word, to advance and improve public health and to limit the spread and mortality of disease.

Therefore, the reorganization was for the purpose of commanding greater assistance in the advancement of both the determining and promoting of these problems. It is on this foundation that the fundamental principles of the A. M. A. are grounded. To elucidate the working plans of the A. M. A., let me return to the unit forming its foundation stone, namely the component society. In support of what has already been said, let me emphasize the fact that to be a member of good standing of the American Medical Association, one must primarily be a member in good standing of the medical society in the county in which he lives, and his society must be in good standing with his state medical society. Delinquency in the payment of one's dues, or in the neglect to control one's actions or practices to the extent that the latter becomes questionable, may endanger or even cancel such a membership. Cancellation of membership in your county society immediately cancels your membership in your state medical society, and in turn to the A. M. A., and renders you ineligible to membership in either until you have been restored to membership in your county medical society. In addition to the officers and members of the House of Delegates of the A. M. A., and members of its standing committees, all members of the county society in good standing are members of the scientific assembly of the A. M. A., and are privileged to participate in the scientific and social programmes of the general and in the several sessions. Those who are members of their county society and state society in good standing for more than two years may apply for and become Fellows of the A. M. A.

The government of the American Medical Association is determined by a Constitution and By-Laws, prepared and adopted by its legislative body—the House of Delegates.

Its finances are directed by a Board of Directors, known as the Board of Trustees, and its scientific programmes are arranged and directed by the president, secretary and editor, together with the chairman of the different sections.

This committee is known as the Scientific Assembly.

The public health problems come more particularly before the various bureaus and councils, organized to consider such in conference and, subsequently, direct and refer them to the

proper department of the Association for action.

All matters of the Association's business, elections, etc., must be brought to the House of Delegates for action and disposal. All reports of committees, officers' reports, resolutions and matters of importance are first read before the House of Delegates and referred to proper reference committees, whose business it is to carefully study the subject referred to and report the same back to the House of Delegates with their findings and recommendations for final action.

All questions involving the expenditure of money are referred to the Board of Trustees, who are the Board of Directors and the financial agent of the Association.

Questions of membership affecting one's standing in his county, state or national association must be taken up first by the respective society and in the way provided therefore in the By-Laws, and when satisfactory results fail to be reached, recourse may be had to the Judicial Council, whose privilege and business it is to investigate and finally dispose of the matter in hand. Passing from the corporate government of the Association, let me dwell to some extent on the magnitude of the business transacted, the publications edited and mailed out, the responsibility of the management, its membership and philanthropic achievements, etc.

First, the gross business transacted annually is, in general terms, close to one and a quarter million dollars, its wage and salary items alone are more than three hundred and fifty thousand dollars, and it pays the United States Government annually for postage more than sixty thousand dollars. In addition to its chief publication, "The Journal", the weekly circulation of which alone has passed the 95,000 mark, it also publishes books, special monographs for individual members of the Association, a directory of its membership by states, together with the following six special journals:

The Archives of Internal Medicine.

The Archives of Neurology and Psychiatry.

The Archives of Dermatology and Syphilology.

The Archives of Surgery.

The American Journal of the Diseases of Children.

Hygeia.

The membership of the A. M. A. is now past the 90,000 mark, and I challenge the member-

ship of any corporation, here or elsewhere, to produce another where the organization has a gross annual income of a million or more dollars, in which its stockholders not only do not participate to the amount of one penny in the earnings of the Company or Association, but to which they annually contribute more than one-half million dollars, all or the greater part of which is spent in an effort to uplift and better the health interests and conditions of the people of the country in which they live.

While the Journal of the Association is given over mostly to the publications and discussions of subjects of interest to the general practitioner, the special journals are published largely in the interest of special medicine and those limiting their practices to specialties. In addition to the foregoing, the Association publishes a directory of its members, revised and kept up-to-date every second year. This is a book of about 2,500 pages, giving minute personal data of 95% of the physicians in the United States, Canada and including approximately 7,500 hospitals. A quarterly index is published solely in the interest of scientific medicine, the appreciation of which is affirmed by its circulation in no less than twenty-odd different countries. This index gives the user a reference to practically all of the worthwhile articles currently published in the world's medical journals. The Hygeia is a health journal for the lay people, and it is reasonably expected its circulation will ere long surpass that of the Journal. It should be and is the intention of the editorial staff to make Hygeia a necessity in every intelligent household.

Making possible this great work of the profession which the Association is carrying on, through its weekly publications, etc., are its working bureaus and councils. These councils are composed of various numbers of Fellows, nominated by the President and elected by the House of Delegates, and are in effect standing committees, whose business is confined to matters and questions closely allied to and of great concern to the profession and the people as a whole. The Council on Health and Public Instruction consists of five delegates, and its scope embraces legislation, public instruction, defense of medical research and public health subjects. The Council on Medical Education and Hospital, also consisting of five Fellows, has as its chief duties the investigation of present status of medical educa-

tion, the standards that are being maintained and recommendations for the advancement and improvements of the same.

The Bureau of Legal Medicine and Legislation organized to assist in the study of legislative matters and medico-legal problems in which the medical profession is or may become interested. It will also assist in coordinating the activities and requirements of the several constituent state associations, and advise with reference to the legal interests of the A. M. A.

One of the most important bureaus of the A. M. A. is the Bureau of Investigation. It would be hard to estimate the amount of work done by this department and the scope of its influence. Unless one is able to estimate the fraud, the injury, the disease and the waste that follow the traps and pitfalls laid by the nostrum vendor and false advertiser through varied propaganda spread before the innocent and unsuspecting public, it would be difficult to grasp the enormity of such evils, much less estimate them.

Parenthetically speaking, under the propaganda or investigating head may be included illegal distribution of narcotics and the disrespect for and resentment against the Eighteenth Amendment. Quantities of the former are dispensed through prearranged channels of trade, and it arouses, to a greater or lesser extent, the individual's opposition, detrimental to the majesty of the law. There seems to be a popular wave of irresponsibility and crime sweeping over our country, a sort of "jazz" is permeating everything; it is not alone to be found in music but in many ways it may be claimed, and rightly so, to be permeating society, business, politics, state and national rights, religion, etc. So disturbed are the two national political parties today over the "wet" and "dry" question that they dare not even contemplate the results of the coming presidential campaign. No more can Congress or the State Legislature enact laws that will be obeyed if the individual is against them than can Congress or the State Legislature govern the placing of man's affection or his religion. Revolution is surely fixing its grip on many things possibly nowhere more than on society, social environment and selfish ascetitude. You ask the cause and the remedy—it is not for me to affirm the former or prescribe the latter; social evolution is surely at hand or approaching, but how soon we may recognize its sovereignty none

may venture to answer. The latter references are not exactly germane to the subject under discussion, hence should have no place in its presentation, but my thoughts, rather my feelings, have led me astray. Therefore, let me say, in closing, education, not legislation, is the strong arm and scepter of the Army of Progress. Don't let us build too much on law or the principle of "Thou shalt not." People are growing more and more self-contained and self-ascertained. They are more wisely persuaded, as a rule, than forced, and results obtained by the former are more lasting and satisfactory. This latter reference I am venturing to state in the interest of your coming state medical conference, called for next week, at which you are to consider the subject of legislation.

The biographical department not only contains the incidents of its membership to date, their writings, public positions, civic, religious and political interests, but all other recorded data, such as militate against one's good record with that of the number of licensed physicians practicing, who are not members of the A. M. A., together with complete record of most quacks and charlatons of this day and generation. In addition, there is kept, for the benefit of its members, an information service, the object of which is an ever-ready assistance to the physicians sending in queries of various kinds for information of all sorts pertaining to health and allied questions, authors, and all such questions as are constantly arising.

I apologize for occupying so much of your time and especially for the parenthetical clause indulged in at my closing. I hope what I have said relative to the Association and its reorganization has at least stressed some points of interest and queries you may have had in your mind concerning the subject.

CONGENITAL HYPERTROPHIC PYLORIC STENOSIS*

J. W. SNYDER, M.D., F.A.C.S.,
Miami.

Congenital hypertrophic pyloric stenosis is essentially a mechanical obstruction of the pylorus (in the infant), due to hypertrophy or hyperplasia of the pyloric musculature.

The exact etiology of the process remains in doubt. Males are more frequently affected than

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females and a slight hereditary factor has been shown. Whether it is a true congenital process has been questioned, as symptoms seldom appear for several days after birth. Cautley has described an instance of its occurrence in a seven months' fetus, and as the tumor is of such size as scarcely to be credited to post-natal development, we believe that a congenital hyperplasia of the circular muscle fibers of the pyloric ring and antrum must be assumed. Fraser recently has suggested that a delay in the acquisition of parasympathetic inhibition by certain segments of the alimentary tract in the presence of persistent sympathetic stimulation is the causative factor in the muscular hyperplasia.

It is interesting to find that in the earliest article appearing on the subject, that of Beardsley, in 1788, both a clear-cut clinical picture and a definite pathology were established. He describes "the pylorus invested with a hard compact substance, or scirrhous, which so completely obstructs the passage into the duodenum as to admit with difficulty the finest probe." It is also strange to find that in the following century little or no attention was given to the condition and modern interest dates from Hirschsprung's contribution in 1888.

Observers are quite uniform in their description of the lesion. The pylorus is described as pale, of the size and consistency of an olive, mobile and free of adhesions, the tissue itself firm and almost avascular, the stomach dilated above the pylorus and the duodenum empty below. The pyloric canal is markedly constricted, and the pylorus itself projects into the duodenum in a manner similar to the projection of the uterine cervix into the vagina. On section of the pyloric tumor, it presents a dense, firm and uniform structure down to the mucosa. Wollstein states from an examination of twenty-five cases studied at autopsy that: "The mucosa and other layers were normal except for the circular muscle coat. There was a hyperplasia of the unstriated muscle cells without increase of the connective tissue, which was responsible for the increase in the size of the pylorus."

The onset of symptoms is usually abrupt and occurs, as a rule, within two to four weeks after birth. Simple spitting up of food passing on to projectile vomiting and rapid weight loss should at once bring the thought of pyloric obstruction to the mind of the attending physician. The condition is progressive, seldom showing periods of

improvement of any duration and never being present during the first few days after birth. Vomiting occurs after food has been taken and not during feeding, as distinguished from esophageal obstruction. Vomiting once established is continuous, although one or two feedings may be retained before expulsion occurs. If vomiting ceases for a period of days, pyloric stenosis is unlikely. The vomitus is bile-free. The presence of bile points to duodenal obstruction rather than pyloric. Associated with vomiting is a profound constipation. The stools are of the starvation type, consisting of mucus, bile, and the intestinal secretions. The child shows a rapid loss in weight and becomes markedly dehydrated.

Examination shows an emaciated, dehydrated infant, with lax abdominal walls and a full epigastrium, due to the distended stomach. Peristaltic waves may be seen to traverse the stomach, and careful palpation will usually disclose a pyloric tumor. The importance of a palpable pyloric tumor is emphasized by all observers. Bolling finds it present in all but one of 454 cases preoperatively, with an error of diagnosis in three cases, as shown at operation. Palpation in the proper manner is necessary. This is best done, after the stomach has been emptied, by a catheter, and while the child is kept quiet and relaxed by a feeding.

Röntgenological examination in well-developed and clearly-defined cases is superfluous and possibly harmful, but in border line cases it may be of very definite value. Should the barium meal readily pass the pylorus, it is, of course, obvious that pyloric obstruction does not exist. Strauss defers operation if 80% of the opaque meal passes through the stomach in four hours, and resorts to surgery when not more than 50% passes the pylorus. Many cases have an incompetency of the cardiac orifice, which permits much of the meal to remain or be regurgitated into the esophagus.

In differential diagnosis, congenital atresias of either esophagus or duodenum present symptoms promptly, with no free interval of several days. Congenital stenosis are more difficult, as the obstruction is incomplete. The Röntgenogram should be resorted to in each of the above conditions.

Various intestinal obstructions from bands, hernia, etc., present a somewhat different clinical picture. The vomitus contains bile or it may be intestinal in character. Circulatory disturb-

ance may result in early necrosis of the intestinal wall and peritonitis.

A rather indefinite group of cases falls in the classification of pyloric spasm. The symptoms are similar to those of pyloric stenosis, but the onset tends to occur later and the course is intermittent in character. Remissions in the vomiting occur, there is no palpable tumor, and surgical exploration discloses a normal stomach and pylorus.

The question of choice in treatment of pyloric stenosis, whether medical or surgical, was formerly actively debated. Surgical procedures were not at first standardized, and this, combined with last-minute intervention, resulted in a high mortality. Fortunately, this condition has changed. Surgery now carries a very low mortality and offers such positive relief of symptoms that no well-developed case of pyloric stenosis should be denied the benefit of exploration. It may be granted that a certain number of cases, under careful and prolonged medical management, can be carried through to safety, but it is always a question whether the child will die of starvation before any natural tendency to spontaneous resolution of the pyloric tumor becomes effective. In pyloric stenosis there is a definite mechanical block at the pylorus, whether due to tumor or long-continued spasm and hypertrophy is beside the point. Such a mechanical block should be best met by mechanical relief.

Feeding of breast milk or thick cereal, combined with atropine, are probably the best and most popular medical measures. In most cases the obstruction is not complete and some food passes out of the stomach. Mild and border-line cases may be given a trial under this regime, but if within a few days food stools do not appear with a decrease in vomiting and gain in weight, operation should no longer be delayed.

At this point I wish to note certain physiological factors which I believe have not previously been applied to congenital hypertrophic pyloric stenosis.

MacCallum and his co-workers were probably the first to show a decrease in the plasma chlorides and an increase in the carbon dioxide, combining power of the blood in cases of high intestinal obstruction. Haden and Orr have shown on dogs and rabbits that high intestinal obstruction is productive of a toxic state, showing a lowering of blood chlorides, an increase

of blood urea and an increase in the carbon dioxide, combining power of the blood. Brown and associates emphasized the renal involvement in cases of duodenal intoxication. Dixon noted that in duodenal intoxication sufficient normal saline not only caused a decrease in the carbon dioxide, combining power of the blood with an increase of plasma chlorides, but also the disappearance of renal involvement in the course of hours.

Later work by Walters and associates has shown such toxic states with similar blood changes to be present not only in high intestinal obstruction, but in both gastric and duodenal fistulae. Evidently, loss of gastric secretion, by vomiting or otherwise, depletes the body of chlorides and fluids, upsets the acid-base equilibrium in the organism and results in alkalosis, decreased blood chlorides and renal changes.

The remedy which has been most successfully applied in gastric surgery, where pyloric obstruction with vomiting has produced a toxic dehydrated state, consists in intravenous normal saline, combined with glucose. From 1000 to 3000 cc. are given daily, and a very spectacular change in the toxic state and the blood chemistry follows. Normal saline not only replaces depleted body fluids, but increases the blood chlorides and corrects the alkalosis, while the glucose maintains the metabolism of the body and prevents ketosis.

I believe the physiological effects of pyloric obstruction and persistent vomiting are the same in an adult and infant. The remedy should likewise be the same. Experience has shown that a day or two spent in preparing a toxic dehydrated infant for surgery by subcutaneous or intravenous saline, with or without glucose, definitely lowers the mortality. Glucose by rectum should be used as an adjunct.

Preliminary to operation, the stomach should be emptied by lavage. As the entire procedure can be carried through very well under local anesthesia, I can see no reason for employing a general anesthetic, although some men use it by preference. General anesthesia carries a certain definite risk in itself, and subsequent respiratory infection, due to aspiration of stomach contents, must be considered. Shock should be less under local anesthesia, and, with the child securely restrained, little trouble will be encountered in its use. Conservative use of the novocain

solution will not impair the vitality of the tissues or interfere with subsequent healing.

The first surgical procedure employed in pyloric stenosis was forcible divulsion of the pylorus through a gastric incision. This, in turn, was succeeded by pyloro-plasty and gastro-enterostomy. The latter was very successful in skilful hands, but gastro-enterostomy was quite a procedure to impose on an infant, and the mortality rate was still too high. With the development of the Rammstedt operation, the essentials of which were first given by Fredet, all previous surgical difficulties were met. This operation can be done quickly with little trauma and a marked degree of safety. It at once relieves the obstruction and ultimately causes the disappearance of the pyloric tumor, as shown by Wollstein in twenty-three specimens.

The essential points in the operation will be developed in the following typical case of pyloric stenosis:

Baby L., male; birth weight 6 lb. 6 oz.; on artificial feeding, vomiting began during the third week and on the twenty-ninth day it became definitely projectile, with visible gastric peristalsis. Under atropine and lavage with breast milk feedings, no improvement occurred, and when five weeks old, it was admitted to the Jackson Memorial Hospital. Examination showed a child with a pinched face, sunken fontanelles, pale mucous membranes and a weight of 5 lbs. 5 oz., which was a fifteen per cent loss from birth weight. Rales were present over the chest, the abdomen was relaxed with epigastric fullness and visible peristalsis. A doubtful tumor was palpable in the right epigastrium. The vomiting was projectile, and from a few minutes to 2 hours after feeding. Röntgenological examination showed that practically none of the opaque meal had passed through the pylorus at the end of eight hours. Normal saline having been given subcutaneously and intraperitoneally, with evident improvement in the general condition over a two-day period, the child was considered ready for surgery.

The infant was carefully restrained and adequately covered to conserve body heat. Under regional anesthesia, with $\frac{1}{2}\%$ novocain solution, an incision was made over the right rectus muscle, one-half above and one-half below the edge of the liver. The incision was of a size to admit two fingers. No complaint was registered

by the child until the peritoneum was incised. By gentle retraction of the liver, the pylorus was visualized and readily lifted into the wound, where it was grasped by the thumb and finger of the left hand. It was very firm, almost avascular, and about the size and shape of an olive. A longitudinal incision was made over the tumor between the superficial vessels, and the incision was deepened for the full length of the tumor, almost to the mucosa. A hæmostat was then employed to spread the incision and so rupture the remaining muscle fibres. This procedure obviated accidental perforation of the mucosa. Although recoveries are reported following such accidents, where immediate suture of the rent was done, still, it is an unpleasant happening at best. This accident is especially liable to occur at the duodenal end of the tumor, for, as previously stated, this portion projects out into the duodenum in a manner similar to the cervix into the vagina.

The separation of the incision was continued until the mucosa showed in the bottom of the wound for slightly more than one-fourth inch over the entire length of the tumor. After making sure that no remaining strands of muscle remained, the abdominal wall was closed in the usual manner. Healing is of necessity poor in these infants, and careful primary wound closure may prevent later separation of the wound and evisceration. Adhesive support should be maintained until all danger is passed.

The child, at the close of the operation, was apparently no worse for the ordeal. Subcutaneous saline was given before leaving the operating room, and this was repeated once or twice daily for the following three days, together with glucose by rectum. Water was given by mouth soon after the operation, and small feedings of breast milk were allowed within six hours. Feedings of breast milk, alternating with water, were increased in amount as rapidly as possible, and only a minimum of vomiting occurred. Eleven days later, on dismissal from the hospital, the wound was healed and the child had gained ten ounces of weight. The subsequent progress has been uneventful.

Various modifications of this simple surgical procedure have been proposed, but in its simplest form it so perfectly meets the indications that the proposed measures seem unnecessary and complicating.

Bleeding from the pyloric incision, although rarely encountered, may be controlled by fine silk suture or by suturing a bit of muscle obtained from the rectus over the bleeding area.

Operative mortality is largely that of delay. Hill reports 22 cases with 21 recoveries; Strauss, 107 cases with 3 deaths; Bolling, 40 private patients with 1 death, and 239 ward patients with 36 deaths; Ladd, 35 private patients with 1 death, and 197 ward cases with 11 deaths.

In conclusion, we wish to note that the diagnosis (of congenital hypertrophic pyloric stenosis) can be made with accuracy; that surgery merits early selection rather than late; and that post-operative convalescence is rapid, permitting normal growth and development of the child.

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DISCUSSION

Dr. J. S. McEwan, Orlando:

It is hard to discuss such a complete paper as Dr. Snyder's, as he has covered the whole field. For the last ten years, there has been a controversy between the pediatricians as to whether it is a hypertrophy or a spasm of the pylorus. Of course, those advocates of spasm have treated their patients by medicaments and diet, and the other side, of course, resorted to surgery. It is rather unfair to the patient, and also to the surgeon, to insist on treating these cases indefinitely. When we receive these patients, they are almost dead and the pediatrician expects us to save them.

The early diagnosis of these cases, I think, is essential, and I do not think that our friends the pediatricians ought to wait until we get a completely dehydrated baby and expect us to do the rest. When you have a tumor that is palpable, with all the other symptoms of pyloric obstruction, I believe surgical treatment is indicated immediately and not wait three or four weeks until the patient is in poor condition.

I had a case not long ago—you read these articles on this subject and they refer to cases occurring three, four, six weeks after the patient is born—but this case of mine, three days after the child was born, the palpable tumor was present. The case was operated immediately and a true congenital hypertrophy was found.

The preliminary steps as Dr. Snyder told you are really very essential before operation. Either glucose or saline or a blood transfusion. I am beginning to believe that 100 c.c. of blood given these babies does more good than the glucose, and we are doing that now as a routine in all of these cases.

There is only one operation now. In the old days, I can remember when I did a gastroenterostomy and most of the babies died, but now they all live if it is done early and properly. I have not found it necessary to divide all the muscle fibres in this operation. You can leave a few and the patient gets well just the same.

I don't think there is any surgeon who has performed this operation who hasn't nicked the duodenum, and of course, this is a very sad accident. You can stitch it up with a piece of muscle brought up over the mucosa, so you won't have a blowout, but you want to pray all the time.

Another thing I have found, instead of using catgut, I put in silkworm gut sutures, taking up all layers except the peritoneum. I leave these in for two weeks, and they avoid the ripping open of the wound which we surely get in these badly emaciated, poorly nourished babies.

We are operating on these patients early, and are getting 100% cures.

Dr. V. D. Stone, West Palm Beach:

I think Dr. Snyder has covered the subject well, and I have nothing in particular to add, but I want to emphasize again the importance of operating on these patients early. They should receive the benefit of surgery before they become severely dehydrated, but unfortunately most of them do not receive the benefits of surgery until this condition is pretty well established.

These cases, I think, are similar to all other cases of high gastro-intestinal obstruction. Surgery should not be considered the procedure of last resort, and the method should be that one that requires the least time and the least amount of trauma and handling.

As Dr. Snyder stated, there is only one operation, the Rammstedt. It is quickly done, requires very little handling and fulfills all requirements for the relief of the condition.

Dr. Edward Jelks, Jacksonville:

I think this subject is worthy of the attention of the profession in Florida, particularly since a few months ago I got from Dr. Stewart G. Thompson some statistics. They showed that in 1925 six hundred and thirty-four babies died between the ages of two weeks and five months. Of that number six had the definite diagnosis of congenital pyloric stenosis. Sixty-six died with such indefinite diagnoses as "gastro-intestinal disease," "vomiting," "stomach trouble," "convulsions," "malnutrition," "improper milk," etc. One per cent of the deaths, then, were from pyloric stenosis and ten per cent died with diagnoses which might be confused with, or might be, this condition.

There are three points in Dr. Snyder's paper I would like to emphasize. First, X-ray examination is one of the best means we have for determining the presence of congenital pyloric stenosis. All of the barium does not have to stop in the stomach for a positive diagnosis to be made. I recall one case where the X-ray did not show any gastric retention of barium whatever. At operation we found a characteristic congenital pyloric stenosis.

The second point I would like to bring to your attention is well illustrated by the projection on the screen. You will note that the gastric portion of the tumor projects down into the duodenum in a shape similar to the cervix uteri. Thus there is a small area of the duodenal wall which lies over the duodenal portion of the tumor. Consequently in cutting through the tumor it takes great care not to penetrate the duodenal wall. I had the misfortune of doing this in one patient. Immediate suture with silk prevented any trouble. The recovery was uneventful.

The third and probably most important of all is the preparation of the patient before operation. There is no need for undue haste. There is every need for fluids to be supplied the dessicated tissues.

If we doctors will be on the lookout for congenital stenosis, will give wise preoperative preparation, and do a simple operation of carefully cutting across the hypertrophied muscle fibres, I believe we will save a number of infants in our State each year.

Dr. C. D. Christ, Orlando:

Of course, a great deal of stress is laid upon the accident of cutting through the duodenum. But when you consider the low degree of infectiousness at that point, it really isn't so serious after all. The expert operator who is doing this every day in the larger institutions gets by, but the fellow who does it once in a while sometimes makes a slip. That slip isn't nearly so serious as a lot of men would like to tell you it is, because of the very low degree of infectiousness of that part of the intestinal tract.

I want to report a case—drawing my conclusions simply from the history of the case: A woman 59 years of age, whose mother was living at 83, and her mother gave me a very definite history of this woman when she was a baby. Beginning at five weeks, she vomited almost constantly for five months, and was kept alive by rectal feeding during that time. She finally got over it, but her digestion was never very good and for twenty years preceding the time I operated on this woman, she was a sufferer from chronic indigestion and a chronic invalid.

The X-ray showed this woman to have a very much dilated, sacculated, stocking affair stomach, with no other particular pathology except the fact that barium stayed in her stomach for sixteen hours. I went in and did the operation that was recommended by Horsley, splitting one

inch of the duodenum and two inches in the stomach and stitching the wounds together in the opposite direction. The woman made a splendid recovery, has regained her health, and is perfectly well and able to do her housework after twenty years of invalidism. The question is, in that case, did she have in babyhood a congenital pyloric stenosis and was her present condition the result of this? In other words, when these cases occur and are cured without operation, what is the aftermath of their digestive condition? I would be much interested to hear from some of the men who might have followed up such cases.

Dr. F. C. Moor, Tallahassee:

There is no discussion about the method of treatment. I am absolutely convinced that all cases that start out with symptoms such as have been described are not necessarily congenital pyloric stenosis. The author, in his paper, mentioned the fact that there are cases of pylorospasm and I want to emphasize that fact and that, while early diagnosis and early surgical treatment in the cases of true stenosis is undoubtedly the only treatment and the only thing to be considered, the patient at least deserves a long enough study to arrive at definite diagnosis. Jumping at conclusions, I do not believe in. That is one point that I want to stress. These cases deserve a careful study, and the case is not urgent to the point where a day or two can not be taken for observations. It has been my experience that if sufficient time is taken, the differentiation can be made, but it can not be made in the first few hours.

Dr. C. L. Kennon, Miami:

There is no doubt about procedure in true stenosis, there is only one. The baby that is having starvation stools, is vomiting, exhibits visible peristalsis, but is gaining in weight, that child should not be operated. I happen to have one at present. I imagined I could feel a tumor, there was present the typical projectile vomiting, there was visible peristalsis, but the patient was gaining in weight slowly. This case was not for operation.

One of the speakers spoke of the X-ray as invaluable. In your chronic indigestion cases, particularly of your bottle babies, you get visible peristalsis, you get projectile vomiting, you get everything except a palpable tumor, and you will get a retention of your barium in four to six hours. Start that baby on breast milk and

you see lots of them go on without any further treatment.

Dr. Mary Freeman, Perrine:

I had one case of what I thought was pyloric stenosis, but as it was the first case I had come across, I asked an older physician about it. He suggested that we try it on nursing eight minutes and then giving a tablet of bacillus *Bulgarius*. We had a splendid nurse, the patient was a fine boy, but the projectile vomiting still continued. He could not retain water. The nurse, however, made the experiment of nursing four minutes, then the tablet, and then nursing four minutes, drawing him away from the breast and laying on his right side, and the baby came through all right. It is the only case I have had, but it came through so nicely with this procedure that I thought it was worth giving to you.

CONCLUSION

Dr. J. W. Snyder, Miami:

Of course, the primary thing is a correct diagnosis. We are dependent on a good pediatrician for help in this matter. We don't want to be dogmatic and welcome every help we can get.

I might emphasize one point in the division of the pyloric muscle that may save a perforation of the mucosa. Division of the muscular ring should be carried nearly to the mucosa and the remaining fibers torn apart by separation of the edges of the incision with forceps. The chief danger is at the duodenal end of the incision where special care should be exercised.

With regard to the adult type, I ran across several instances in the literature, of cases evidently of true hypertrophic stenosis in infancy which persisted on through into later life with symptoms of chronic indigestion extending over many years.

The great advantage of division of the pyloric muscle in the Rammstedt operation is that the tumor ultimately disappears. When you divide the muscle, the tumor will cause no further trouble.

CHRONIC DUODENAL ILEUS*

T. Z. CASON, M.D., and J. A. BEALS, M.D.,
Jacksonville.

From the confusing mass of patients with chronic dyspeptic complaints, scientific medicine is isolating certain groups with definite and

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remedial pathology. Peptic ulcer, recurrent appendicitis, gall bladder disease, and other less common conditions are today diagnosed and treated with creditable efficiency. There remains, however, a large number of patients whose disorders are unsolved problems. Among these the hyposthenic, visceroptotic, neurasthenic individual predominates.

This paper attempts to isolate from the unsolved mass, a small but important group of patients with chronic obstruction of the duodenum, which results in delayed motility, dilation, and some degree of atony; a condition designated as chronic duodenal ileus. The symptoms are pronounced but are not totally incapacitating and have much in common with those of the more familiar causes of dyspepsia.

Etiology.—There are many conditions which can partially obstruct the duodenum. The most frequent cause is explained as follows: The mesentery of the jejunum and ileum is attached in a long oblique line to the posterior abdominal wall. However, all of the superior mesenteric vessels join the aorta or vena cava only through the superior part of this attachment. Here they are joined by the vessels of the right and transverse colon. The transverse colon is always suspended by its meso-colon. The caecum and ascending colon are frequently very mobile or possess a pseudomesentery. Thus the jejunum and ileum, to a lesser degree the transverse colon, and in some individuals the right colon, would have their entire weight suspended by the superior mesenteric vessels and the upper part of the mesenteric root, if it were not for the support afforded the intestines by several factors.

Chief among these are adequate tone of the anterior abdominal muscles and pelvic floor and the padding of fat in the mesentery and abdominal walls.

The distal segment of the duodenum is retroperitoneal and is crossed by this upper extremity of the mesenteric root and superior mesenteric vessels just before they reach the aorta and vena cava. When the normal fat pad is lacking and there is, also, deficient muscular tone of the abdominal wall and pelvic floor, it is not surprising that the weight of filled or overfilled intestine, swung by a narrow band over the duodenum, compresses it and causes proximal delay and dilatation. That such compression and dilatation does occur in some individuals has been established

by surgical, autopsy and radiologic findings. Why it is not present invariably in visceroptotic individuals depends upon several factors which will not be discussed at this time.

History.—In the main, histories are those of years of digestive discomforts, gradually growing worse. "Nervous" and "sick" headaches are complained of. True migraine may be suspected. The headaches are usually relieved by vomiting, sometimes induced. Periodicity of suffering is common; some free from symptoms between attacks; most are never entirely comfortable or well. Nausea is frequently associated. We have not been impressed by the complaint of heart burn, sour stomach, persistent belching, or regurgitation. Constipation is usually habitual. Patients often know that it is worse before an attack. Exacerbations often terminate with an eliminative diarrhea, or are shortened by purgation.

The sufferer, generally, has been ill-advised as to diet or has himself concluded that various foods precipitate attacks. One after another article of diet is eliminated until the patient is subsisting on a poorly balanced, constipating and insufficiently supporting diet. Close questioning, however, will often reveal no true relation of attacks to kind or quantity of food taken in moderation. They are most comfortable before meals, more distressed two or three hours after meals, and get through the day better when eating little.

Most of them have pain, occasionally so acute as to simulate the pains of ulcer or gall-bladder disease. Generally the pain is described as dull, aching, heavy, drawing, pulling, or boring, etc., and between attacks is but an ill-defined discomfort. It is poorly localized, but generally ascribed to the upper abdomen.

The history very often is clouded and confused by neurasthenic narration, giving rise to improbable accounts of heart failure, nervous breakdown, bizzare sensations, fainting spells, etc.

Physical Examinations.—When the duodenal ileus is due to mesenteric pressure the physical findings are but little different from those of the many visceroptotic individuals without demonstrable ileus. These patients are of the well-known slender, sallow, poorly developed hyposthenic type.

One or both kidneys and the inferior liver margin are palpable and in an abnormally low position. There is liable to be slight anemia, low blood pressure, and little cardiac reserve. In our cases we have been impressed by the greater amount of increased lumbar lordosis, prominence of the abdomen below and depression above the umbilicus with the patient in the standing posture.

Clinical laboratory tests are of little value. Gastric subacidity is usually present and food remnants may appear in the fasting stomach.

The X-ray Findings.—In the advanced cases there is a gastric residue of the six-hour motor meal up to 50 per cent and a second residue in the dependent loop of the duodenum, both showing a fluid level and giving the appearance of a double water trap. Both stomach and duodenum are dilated and atonic, descending to near or below the brim of the true pelvis. The duodenum may be as large as a normal stomach and show faint or absent valvulae. The duodeno-jejunal angle is quite acute. The dilation can be seen to end abruptly near this angle, which is the point compressed by the mesenteric root and vessels.

Less advanced cases show a fair degree of tone. The stomach and duodenum are empty in the six-hour interval. However, the duodenum, which usually shows the valvulae, can be seen persistently dilated two or three times its normal diameter.

The marked cases show this dilatation continuously; the less marked ones are variable, and between attacks of greatest distress show no more duodenal delay or dilatation than is encountered in the many border-line or indeterminate cases.

The borderline class includes many patients, who if persistently observed with the fluoroscope will, from time to time, show periods of definite delay and stasis in the distal duodenum. These periods, however, are transient, lasting only a fraction of a minute, with intervening normal intervals of several minutes.

Frequency.—Patients with decided X-ray evidence of duodenal ileus are not common. However, if those with mild or transient delay are included the group may be made to embrace nearly all visceroptotic individuals.

Treatment.—Treatment may be medical, surgical or a combination of the two. The chief

object of medical treatment is the effective application of measures to overcome the patient's visceroptosis and thereby relieve the partial obstruction of the duodenum caused by mesenteric-vascular drag. In our opinion these measures are:

- (1) Absolute rest in bed with the foot of the bed elevated.
- (2) A fattening diet, and adequate elimination.
- (3) Graduated exercise and massage to increase muscular tone.

Patients must lie in bed continuously for a period of not less than three weeks, preferably six. They are allowed to assume the prone or supine posture, but not the lateral or to lie with shoulders elevated. They must be guarded against acquiring the bed habit. Food is given in small quantities at frequent intervals; the diet of a fattening character well above the average caloric requirements. Elimination must be carefully cared for, otherwise these patients will grow worse and lose weight. Massage and a certain amount of exercise in bed are very helpful in increasing muscular tone. We have not used other physiotherapeutic measures. Dilute hydrochloric acid is administered if indicated. We often give cacodylate of soda hypodermatically when mild anemia is present. Almost invariably patients rebel against this treatment at first. Success is attained only after the patients have overcome their aversion to the unnatural posture and their fear of food.

Their weight may remain stationary or gain only a few pounds during the period in bed. They are allowed out of bed gradually and instructed to rest and sleep for a long time in the head down posture. They are allowed to assume normal daily activities only very slowly and all excesses prohibited. Small, frequent meals of fattening food are continued for weeks or months. Exercises, directed to strengthening the abdominal muscles are prescribed. Abdominal supports are sometimes fitted but quite often the X-ray examination shows these have but slight effect on the ptosis. These patients generally show the greatest gain in weight after they are up and about during most of the day. By this time the improvement in their symptoms is usually sufficient to encourage them to continue the regime of rest, diet, and regulated exercise. They are not restored to vigorous

health for many months. The treatment is beneficial even in advanced cases and in the less advanced is curative to a degree proportional to the patience and perseverance of the physician and his patient. In our small series of typical cases of chronic duodenal ileus all have been benefited, some greatly, but in none have we been able to carry the patient through to restoration of complete health and vigor.

Surgery has not been resorted to for any of our patients. It is distinctly indicated, however, when the maximum benefit from medical treatment still leaves the patient largely incapacitated for the performance of his daily duties. Perhaps surgical treatment is indicated from the start in all patients with advanced ileus. Excellent results have been reported, but generally the conservative surgeon will avoid this class of asthenic and neurasthenic patients for whom the prognosis is uncertain.

Duodenojejunostomy and gastrojejunostomy according to the decision at the operation, seems to be the methods of choice, particularly in the advanced cases. In the less advanced, where an abnormally mobile right colon is present and appears to account for the mesenteric drag, colopexy or resection of the right colon with anastomosis of the terminal ileum may be the operation of choice. Mortality and morbidity from these operations may be reduced to a low percentage. However, ultimate success will be augmented by postoperative medical treatment directed toward correction of the visceroptosis.

Conclusions.—Chronic duodenal ileus is a recognizable clinical and pathological entity, usually, though not always, dependent upon partial stenosis of the duodenum at the point where it is crossed by the mesenteric root and superior mesenteric vessels. Here, in some visceroptotic individuals, these structures exert compression.

The symptoms are those common to most patients having chronic dyspepsia and visceroptosis, but are somewhat more distressing, more chronic, and show a greater tendency to periodicity and the occurrence of headaches.

The radiologic appearance of well-established duodenal ileus is diagnostic, but transient or mild dilation should be disregarded.

Medical treatment, for correction of causative visceroptosis, if persisted in for a sufficiently long time, is quite beneficial. Under usual circumstances it is seldom persisted in to the stage of complete cure.

Surgical treatment is certainly indicated after medical treatment fails. Surgical, followed by medical treatment, may come to be the method of preference.

DISCUSSION

Dr. F. W. Foxworthy, Miami:

The essayist has kindly furnished me with a short summary of his paper on which I base my discussion. He has definitely established the entity of such a disease.

The anatomy of the duodenum shows clearly the etiology of this entity. At the level of the third lumbar vertebra, the ascending part of the inferior portion of the duodenum is caught between the abdominal aorta and the hard structures posterior to it, and the superior mesenteric artery and vein, in front. The superior mesenteric artery arising from the aorta and passing downward anterior from the duodenum forms a "scissors" effect—the duodenum being between the blades. Any traction downward draws these blades together and constricts the duodenum, a stenosis is present and a dilatation begins in front of it.

There is no clear-cut symptom complex. The X-ray is the conclusive evidence of its presence. Differential diagnosis can not be made without it.

That the treatment has not been standardized is shown by the fact that the internist advises surgery, and the surgeon suggests less surgery. Each is trying to pass the buck to the other. It may be that in time there may be a combination treatment. Lavage of the duodenum with the duodenal tube; postural treatment, such as the knee-chest position, and support of the abdominal viscera as in gastropexy, all may assist in the cure.

Wilkie, in the Mayo Foundation Lecture, October 11, 1926, states that only 23 out of 56 patients were cured by operations; duodenojejunostomy; that he has decided to perform fewer of these operations.

With your permission, I will now show some slides of one of my cases. Mrs. W., wife of a physician, had had numerous attacks of indigestion with the usual symptoms, flatulence, distress, eructations of gas and food, distentions, and finally emesis. At one attack she vomited a small polyp. Seeing her then for the first time, I suggested an X-ray examination which showed a dilated duodenum, as well as a slight deformity near the pyloric end of the stomach. Dr. George

W. Crile, Cleveland, Ohio, operated. He cauterized the base of the polyp, which showed a malignancy in it alone. No anastomosis was done. Postoperative treatment was mainly a simple diet upon which she has been for two years with no further trouble.

Dr. Harold D. Van Schaick, Jacksonville:

I heard Dr. Wilkie of Edinburgh discuss this same subject and he feels that neither the operative nor medical results are entirely satisfactory. All cases, unless acutely obstructive, should have the benefit of preliminary medical treatment. The operative cases fall into two classes, those with definite causative pathology and those without. The former do well postoperatively, the latter, not so well. The X-ray men of late have been noting the condition of the duodenum in their gastro-intestinal studies. We have noted in upper abdominal work, particularly in gall-bladder disease, those patients in whom duodenal ileus is reported, or its presence suspected, the post-operative convalescence is somewhat slower. We have had several cases, one particularly, in an infant of twelve days, in whom an obstruction of the second portion of the duodenum, without apparent cause, was found. A posterior gastro-enterostomy gave relief and the baby gained $7\frac{1}{2}$ pounds in weight. It subsequently died from an acute gastro-enteritis.

The subject of duodenal ileus will bear closer study in the future by surgeons desiring the best results in abdominal work.

Dr. John Elliott Boyd, Jacksonville:

A review of the literature reveals the fact that this is not a recent problem, but was recognized as early as 1752. Yeats discussed it in 1820 and it has been noted by surgeons at regular intervals every since. However no intelligent treatment was applied until very recently.

The theories as to the etiology that are most prominent today are:

(a) Congenital abnormalities.

(b) Factors favoring adhesions in the abdominal cavity, compression of the duodenum, duodenojejunal juncture of the jejunum.

(c) Factors favoring the pelvic position of the abdominal contents.

The symptomatology is divided into those cases presenting complete obstruction and those presenting partial obstruction. For a long time the outstanding symptom was thought to be vomiting of a recurrent type. Recently, how-

ever, a series of seventy-five cases have been reported in which only eight presented this symptom. The symptomatology resolves itself into the type of case that complains of biliousness, headache, nausea, a feeling of distress in the abdomen, lack of appetite and a general condition of wasting away.

The treatment, so far as my personal experience is concerned, resolves itself into a close coordination between the internist and the surgeon. I am convinced that some cases can be entirely relieved by medical supervision alone. I am further convinced that some cases can be relieved only by surgical operation followed by medical supervision.

Mr. Moynihan expresses my views when he makes the following statement: "I feel it difficult to distinguish the case that requires surgery from the case that should be let alone. I regard with not a little suspicion the occurrence of a large number of cases in the practice of any man within a brief period of time."

Dr. W. McL. Shaw, Jacksonville:

I think Dr. Van Schaick has brought out a good point in his discussion of the diagnosis of this subject. The condition has probably been there all along and we haven't been seeing as many as we now think we see. Maybe we did not know what to look for. There has been considerable in the literature on this condition recently, particularly some work from the Crile clinic in Cleveland which appeared in Archives of Surgery. They lay more stress on the congenital causes than the essayists have.

I want to speak a word of warning about finding so many of these cases. Dr. Walter Mills of St. Louis, who died a year or two ago, blazed a trail by letting us realize that the internal organs assume different shapes following different types of body habitus. We know tall individuals have long, vertical hearts. Now we are finding that other organs follow the same rules. We now know that tall individuals have long gall bladders and that short stout ones have short gall bladders. This is the general rule, of course.

I want to speak just a word about the diagnosis of chronic ileus on the findings in the duodenum. So much depends on the position of the patient, whether lying on his back, abdomen, or on one side or the other, and I also think it is rather a hazardous procedure to make a diagnosis on one examination, because it will not

look the same way two days in succession very often. These are just words of caution we should consider in getting overzealous in too frequently finding chronic duodenal ileus in cases of chronic indigestion. The roentgenologist finds these conditions much easier with the fluoroscope than with films. We see it practically always before the films are made. We, of course, realize the condition does exist and it is very easily seen when you are looking for it. I just want to throw out this word of warning in the diagnosis of chronic duodenal ileus: always be sure you can see it in different positions and that the pathology is constant, rather than transitory.

Dr. F. K. Herpel, West Palm Beach:

One cannot examine many gastrointestinal cases without encountering a certain percentage of duodenal obstructions and duodenal dilatations. None of the speakers has mentioned a feature which has been rather forcibly brought to my attention in practically all cases which might be due to duodenal ileus, and that is the presence of a certain tendency to reverse peristalsis in the erect posture. Cases of abnormal dilatation of the duodenum more often than not show the presence of this tendency to reverse peristalsis, particularly in the descending portion and in the loop just before the duodenojejunal junction. I do not know whether that has been particularly stressed, and it may be accompanied by an acute angulation at the duodenojejunal junction, which has been previously discussed.

Dr. C. D. Christ, Orlando:

This condition of dilated duodenum is essentially an obstruction somewhere below. It may be at the duodenojejunal junction or a little further down, but usually it is in that neighborhood.

I had a case about four years ago in which the X-ray showed a tremendous dilatation of the duodenum and evidence of ulcer of the duodenum. He had all the symptoms of duodenal ileus. I went in and he had an ulcer. At that time, I did a simple gastro-enterostomy. He got better and stayed in pretty good shape for a year. He then had recurrent vomiting and he got very much emaciated from starvation and dehydration. I went in again and this time I cut the duodenum off, purse-stringed it and turned it in. The gastroenterostomy was in good shape and why he was vomiting, I do not know. But I did a duodenojejunosomy on that fellow and he got well and he is well today, a little over

four years. I don't know but what the problem of a gastroenterostomy with a severance of the pylorus wouldn't probably be the surgery to hit all these chronic, tall, gaunt individuals.

Dr. Ralph Gowdy, Miami:

I have been especially interested in this paper and the discussions because very recently I had a case of chronic duodenal ileus. There was also another condition in my patient which the roentgenologist and myself diagnosed as a duodenal ulcer which was about to perforate. The X-ray revealed the duodenum to be dilated to nearly the size of the stomach. During peristalsis the duodenum would become spherical in contour and then a reverse peristalsis would force the barium back to the pylorus. At this time what we took to be an ulcer, located just distal to the duodenal cap, would balloon out, indicating that perforation was likely to occur during a reverse peristalsis. At the end of six hours the distended part of the duodenum was still about one-third filled with the barium meal.

The patient was a slender young man 18 years old. His occupation was store clerk. He gave a history of marked distress in upper abdomen which came on shortly after eating. It was difficult for him to describe the pain, but said it was so distressing that he would rather go without eating. He had lost eleven pounds in weight during the previous three months. The distress after eating became noticeable about two years previous and had constantly grown worse.

With the above findings I felt that immediate operation was indicated. At operation what we took to be an ulcer proved to be a diverticulum of the duodenum. The lower part of the duodenum was greatly dilated and flaccid. No pathological obstruction was found at the lower end of the duodenum. The diverticulum was closed and a posterior gastro-jejunostomy was done. The duodenum was left patent so that with increased weight and improved general condition the duodenum may still take on its normal function.

I do not know what the ultimate outcome will be but during the three months since the operation he has gained fifteen pounds in weight and has no distress after eating.

CONCLUSION

Dr. T. Z. Cason:

This subject is an interesting one, and the end is not yet. One point carefully avoided was the

question of congenital origin of this particular condition. There is another thing in which we are interested and which is going to be an important factor; that is, the high heeled shoes the young girls of today are wearing. We think, where in the past there has been one case of visceroptosis, we are going to have ten, and with that there will be a proportional increase in this particular type of patient. So, you can do a little missionary work among the parents of young girls.

With reference to the diagnosis again, we feel there are a large number of visceroptotic individuals who are naturally that way and who have no symptoms. We think the diagnosis of duodenal ileus should not be definitely made until you have proven it by every means known today, and no snapshot diagnoses should be made. It is a serious thing for an individual if you make this diagnosis and outline a course of treatment covering a long period. It has been spoken of for a great many years, as Dr. Boyd said, but we found until very recently the subject has not been adequately covered. Now I think we have reached the stage of treatment, and the next few years will bring out new lines of proper treatment. It is certain we must not be radical and consider surgical treatment without giving them medical treatment first if they will permit, unless in the very severe cases. It is equally important that the medical men and the surgeons cooperate very carefully or we will not get any results from surgery.

Dr. J. A. Beals (closing):

Just one word on the question of this dilatation and stasis in the duodenum. As we tried to emphasize in this paper, there are many causes we did not touch upon, picking out only this one group which is probably dependent, for the most part, upon visceroptosis. The constancy of the findings is important; the degree of dilatation is highly important. In examining with the fluoroscopic screen, many visceroptotic patients will show a lagging, lazy, delayed motility in the duodenum that is not important. There are many other conditions which can cause reverse peristalsis such as Dr. Herpel referred to, other than duodenal ileus. It will appear as a temporary or intermittent dilatation of the duodenum, but the duodenum is not stenosed.

A REPORT OF TWO CASES OF HYSTERECTOMY, WITH REMOVAL OF THE FETUS AFTERWARDS, AND BOTH MOTHERS AND CHILDREN LIVING*

J. S. TURBERVILLE, M.D.,
Century.

Case No. 1.—May 6, 1920. Willie De B. Colored woman. Age 23. Came with a history of severe attack of influenza followed by amenorrhea of about 8½ months. She presented herself for treatment of abdominal enlargement. Examination revealed a mass with large bosselations filling the entire abdominal cavity. Pregnancy was not suspected on account of the well-known characteristics of negro woman being proud of pregnancies, and as the examination revealed definitely fibroid masses in the uterus. Also it is a fact that myomata occasionally produce amenorrhea. Therefore, operation was decided on. Long mid-line incision was made and the tumor turned out. A leisurely hysterectomy was done up to the point of incising the cervix, which then showed a fetal head, and was hurried from this time onward. As soon as the uterus was cut loose, it was rapidly opened and the child extracted and given to an assistant for resuscitation. This was accomplished without difficulty. The usual technic of supravaginal hysterectomy was done and the wound closed in the usual way. The uterus showed several large fibroid masses. Mother and child had an uninterrupted convalescence and left the hospital in good condition. Both were alive the last time heard from, which was about 18 months after the operation. The operation was done through an error in diagnosis.

Case No. 2.—Mrs. Ray McC. White female. Age 25 years. Height, 4½ feet. Pelvic diameter not more than 3 inches. Had been delivered by Cæsarean section 40 months ago. On account of her poor physical condition, exhaustion and shock, the tubes were hastily crushed and tied off, and the operation made as short as possible. She and her baby both made an uninterrupted convalescence.

She became pregnant again and went into labor on Feb. 13, 1927. On account of practically no loss of blood in the operation of the negro woman, it was decided to do deliberately

*Read before the Escambia County Medical Society March 8th, 1927.

(Continued on page 37)

PENETRATING WOUNDS OF THE ABDOMEN*

HAROLD D. VAN SCHAIK, M.D.,
Jacksonville.

The consideration of penetrating wounds of the abdomen really amounts to the study of gunshot wounds as the vast majority are caused, in civil life, by firearms. Only occasionally is such an injury caused by a knife or other implement or missile.

Since the last war there has been an increase in the number of gunshot wounds due to unsettled social conditions. However, in the colored race these have been ever with us as is evidenced by the fact that during the period from 1900 to 1910 in the Charity Hospital at New Orleans, La., there were observed more of these injuries than were sustained by the American Forces during the entire Spanish-American War. The reasons are the modest mental attainments of this race and their indifferent social standards. This also explains why these wounds are nearly always intentional and not accidental.

Diagnosis.—The early grave symptoms of a penetrating wound of the abdomen are those commonly attributed to shock. This shock is almost always due to hemorrhage. This may be external, but is more often intra-abdominal. It is indeed surprising to see a patient early with serious intra-abdominal injuries with little reaction unless there be an associated hemorrhage. Even then there may be little change in the pulse rate or volume until a sudden alarming collapse supervenes a few hours later. Irritation of the peritoneum by escaped gastric or intestinal contents may be a contributing factor in shock, but their biggest part is played later.

Vomiting, nausea and hiccup are not dependable signs as nearly every patient on admission is more or less alcoholic. Vomiting of blood suggests a stomach or duodenal injury, though vomiting of pure gastric contents may occur with the viscera intact and the only finding be hemorrhage. This is probably due to irritation of the vagus endings.

Abdominal rigidity and tenderness are the most reliable signs and are always present with an abdominal lesion. One must be on his guard, however, as these signs also occur with superficial injuries, retroperitoneal hemorrhage, an

injury to the diaphragm or more particularly to irritation of the lower intercostal nerves.

The pulse in shock or hemorrhage may be changed in rate or volume and it is said that a bradycardia indicates a liver injury. This has not been noted. However, neither the changes in pulse or blood pressure indicate the severity of the injury.

Shifting dullness in the flanks is of no value due to tenderness and rigidity of the abdominal wall. The possibility of confusing the shifting of fluid in the large bowel or gravitation of the small bowel itself when the patient is turned on his side must be considered.

Obliteration of liver dullness due to escaped air from stomach or bowel is of value when present, but is by no means always found.

More unusual signs such as elevation of the testicle due to cremaster reflex, escape of bile or gastro-intestinal contents through the original wound or pain in the shoulder from liver injury may be observed, but they are rare.

Bottomley says: "*There is no one sign or combination of signs sufficiently constant to serve as a basis for diagnosis or treatment.*" This most clearly and concisely sums up the attitude of the surgeon toward these injuries.

Treatment.—The treatment is immediate operation, if operation is to be done at all.

Patients do not die from the penetrating wounds themselves but lose their lives from hemorrhage and infection. With the fast modern methods of blood matching, the ease of blood transfusion, the rapid means of administering fluids and nourishment subcutaneously and by vein, no patient should be lost from immediate hemorrhage, if seen within a reasonable time after the injury. Auto transfusion as an emergency measure is at times life-saving. This is shown in the case of a young woman with a gunshot wound of the mesentery, stomach, pancreas and spinal cord. She was nearly exsanguinated, the pulse was almost imperceptible, with a systolic pressure of about 50. Laparotomy was done under local anesthesia, an auto transfusion of 450 c.c. of extravasated blood was given during the time of the operative procedure. This patient died five days later, it is true, but from an infection, peritonitis and meningitis.

This brings us to the fact that the treatment of penetrating wounds of the abdomen in the final analysis is the treatment of infection, its prevention and control. Associated wounds of

*Read before the Staff of the Duval County Hospital, Jacksonville.

the chest must be studied and a careful weighing of all facts done. Generally speaking unless there be cyanosis, dyspnoea, or a large hemothorax, or pneumothorax, laparotomy should be performed under local with the addition of ethylene gas at the proper time.

When an additional severe kidney injury is suspected the kidney should be explored first, the laparotomy following. Operative shock is less and the danger of retroperitoneal infection is too great to risk transperitoneal kidney work in the presence of intestinal perforation.

Upon admission to the hospital, the patient should be sent to operating room and catheterized. If operation is decided upon it should be at once. If, upon opening the peritoneum, free blood is encountered the source should be sought first. A thorough routine inspection and palpation of every abdominal organ including the diaphragm should be made and operative work accomplished as rapidly as possible. Autotransfusion, administration of glucose or saline solutions and preparations for transfusion should be carried out simultaneously as indicated.

Shock.—Shock is controlled by the intravenous injection of from 500 to 1000 c.c. of 10% glucose in normal salt solution during the course of one hour, enough insulin is given to take care of almost, but not quite, all of the glucose, allowing one unit of insulin to each $2\frac{1}{2}$ grams of glucose given. One-half of the insulin is given subcutaneously at the start, the remainder five minutes before the end of the glucose injection. This procedure may be repeated as the pulse flags, though one to three injections ordinarily suffices. This is the best way to handle shock and almost marvelous results are obtained at times.

The post-operative treatment consists of external heat, Fowler's position, withholding of everything by mouth or bowel, and the administration of 3000 c.c. of fluid each 24 hours, by hypodermoclysis or by vein. Morphine gr. 1/6 or 1/4 by needle every six hours at least and oftener if needed for the control of pain or restlessness. Quiet and rest, both internal and external, is what these patients need. The guide to the amount of morphine administered should be the respiratory rate, which may be lowered to 10 or 8 per minute with safety. This is continued for 72 hours.

The mortality has been estimated in *all* wounds of the abdomen as being from 45 to 87 per cent.

Unless the figures are carefully analyzed they mean little. The mortality in this series of nine cases of penetrating wounds of the abdomen with visceral injury is 55 per cent. Five are dead and four are living. This does not include all operations done nor all cases seen.

Of those who died, one had five perforations in the small bowel and two in the sigmoid. He weighed 260 pounds and took a very bad anesthetic. Death was due to peritonitis. One had a large wound of the liver, omentum and pancreas. He was autotransfused, but died three days later from pancreatic digestion, hemorrhage and peritonitis. One had eleven holes in his ileum and three in his sigmoid, low down. A perforation just above the anus was overlooked. He had a positive Wassermann. Death was due to peritonitis. One had a wound of the stomach, mesentery, pancreas and spinal cord. The Wassermann was positive. Autotransfusion was done during the operation, but death occurred five days later from peritonitis and meningitis. One had a wound of the liver and lung. He had a positive Wassermann. Two days later, he developed an obstruction and an enterostomy was done. He did not cooperate, as he drank and ate everything within reach and finally arose from the bed and beat off his guard to get water. Death resulted from peritonitis.

Of those who recovered, one had a penetrating wound of the liver and pancreas. The Wassermann was negative. One had one perforation in the splenic flexure of the colon and three perforations in the small bowel, with free intraperitoneal hemorrhage. The Wassermann was negative. One had three perforations in the cæcum, with a negative Wassermann. One had two perforations in the colon, one in the jejunum and one in the posterior wall of a four weeks' pregnant uterus. Abortion followed with recovery.

CONCLUSIONS

1. The treatment of penetrating wounds of the abdomen is immediate operation, if done at all.
2. The routine inspection and palpation of every organ in the abdomen and all operative procedures should be done as rapidly as possible.
3. Shock and hemorrhage should be controlled by the methods outlined.
4. All patients should at once be treated as if they already had peritonitis, as it is only by this means that the mortality can be lowered.

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NEWS ITEMS

The news department of the Journal has now been carried on continuously for nearly two years. Our readers in many instances have voiced their approval of its interest. The editorial staff believe that this department is invaluable to the Florida Medical Association and great effort has been made to obtain the worthwhile news items from all sections of the state. In addition to the news matters obtained from the county society secretaries, a clipping service is maintained in our office in order that we may secure every news note pertaining to our members that is made in the newspapers of the state. Many matters of interest we fail to secure and it is for this reason that we are appealing to our members to forward notes of all matters of medical interest that may come to their attention, at any time, to the Editor of the Florida Medical Journal, State Board of Health building, Jacksonville.

EUROPEAN INFLUENZA EPIDEMIC AT END; LEAGUE OF NATIONS ISSUES COMPARATIVE DATA

The following figures on the influenza epidemic of 1926-27 are contained in the May issue of the Monthly Epidemiological Report of the Health Section of the League of Nations, which has just been received in New York:

"The influenza epidemic came to an end sometime in March or April. An evaluation of the number of deaths which it has caused from provisional returns, mostly covering only urban districts, must be uncertain, owing to the differing degree of efficiency of the medical certification of causes of death in general, and in particular owing to different systems of tabulating deaths from complications. It is probable, however, that the figures shown below for towns of the United Kingdom, Scandinavia, Germany, the Netherlands and Switzerland are fairly comparable. Most complete are probably the Swiss data, in which case contributory causes of death are very carefully stated and tabulated.

"The average death rate from influenza per 100,000 inhabitants in German towns, 20.7, and that in Dutch towns, 21.9, are very similar. The influenza death rate has been higher in English towns, 38.3, where also the general death rate was higher than in German towns. Still higher rates are encountered in the western part of Switzerland. The figures for Paris and certain other towns should be much increased by the inclusion of deaths attributed to bronco-pneumonia, pulmonary congestion, heart disease, etc., due to influenza.

"Towns in the same country frequently show very considerable differences in their influenza mortality; excluding smaller towns, where the figures are more influenced by chance, they differ as widely as from 8.5 at Glasgow to 63.8 per 100,000 at Nottingham, and from 12.8 at Hamburg to 30.5 at Breslau. The western part of Switzerland has suffered at least twice as much as the remainder of the country, and the town of Geneva has suffered most.

"Although the total mortality caused by the epidemic in Europe cannot as yet be definitely given, it would appear from the available statistics to have been probably not less than 100,000, possibly more.

"These mortality data for large towns give some idea of the extension of the epidemic but are not always truly representative for coun-

tries as a whole. Urban and rural districts frequently react differently to an epidemic, and that has been the case with this epidemic in the Netherlands, which is the only country for which current statistics are available according to size of municipalities. In the Netherlands the recent influenza epidemic caused relatively more than twice as many deaths in the rural districts as in towns of more than 100,000 inhabitants. This relation was less pronounced in 1925 and 1926, while in 1923 and 1924 the influenza mortality was lowest in medium-sized towns. Since the causes of deaths are tabulated only in the Central Statistical Bureau, and the accuracy of certification cannot have become impaired in the towns, it is obvious that this change corresponds to an actual change in the occurrence of the disease, or, rather, in the resistance of the inhabitants in towns and in country.

"Certain other differences between urban and rural influenza mortality exist in the Netherlands. In towns of over 20,000 inhabitants, 59 per cent of the deaths were among women during the recent epidemic, while in the rural districts the number of male and female deaths was equal. Municipalities with between 5,000 and 20,000 inhabitants held an intermediate position, 52 per cent of deaths being among women. It is true that the proportion of women is higher in towns than in rural districts, but the difference (3 per cent) is smaller than for the influenza deaths. It will be recalled that the influenza mortality was considerably higher among females than among males in Swiss towns and in Paris."

THERAPEUTICS

(With Appropriate Apologies)

*Open your therapeutics—study a page or two,
'Twill benefit your patient and it may be good for you.*

*Much you read is inapropos, more is good by far;
Consider the subject matter, take the best at par.*

*It may be an ancient issue, it might be a late edition;
Fortify your mind with facts and better your patient's
condition.*

*Study physiologic actions, apply therapeutic tests,
Rely on good authority, expect results with zest.*

*Physiologic actions vary, therapeutics causes suspense;
Idiosyncrasies considered, use some common sense.*

*Do not blame the drug if the patient is not improving,
Consider your diagnosis, errors may need removing.*

*Open your therapeutics, all covered with dust and brown;
Peruse its pages early and after the sun goes down.*

*Such perusal will give you comfort, perhaps will give
you rest,*

*When the patient is quietly sleeping from a therapeutic
test.*

*Many a doctor has floundered on the rocks of proprietaries,
Swallowing "hook, line and sinker" of the detail Luminaries.*

*The detail man talks glibly of a vaunted panacea;
Consult your therapeutics, each statement test in clear.*

*Let each and every ingredient stand the test of science;
Study your therapeutics for that's the best reliance.*

*It's elixir this, and elixir that, and syrups forty or more,
Many extracts, cure-all tonics and mixtures by the score.*

*Of incompatible, inert drugs, antagonists and junk;
Of sedatives and concoctions all of which are punk.*

*Of pluriglandular formulas, "He would a tale unfold,"
The therapeutic effects of which would "Harrow(er) up thy soul."*

*He praises his firm's productions, good for what may
ail you;*

*Prescribe it in original packages, 'tis all you have to do.
The detail man has a thing to sell, he has a wage to earn,*

He's paid to talk his line of goods, but has a lot to learn.

*Treat him kindly, courteously, thank him for his toil,
But review your therapeutics and "burn the midnight oil."*

*Open your therapeutics and read its pages through,
Here's a potent alkaloid and several sera, too.*

*Which is the better agent, concoctions of many kinds,
Or a number of active principles, fifty kept in mind?*

*Councillors active and potent, comforters helpful, true;
And never a one of the fifty to negative the faith in you.*

*Use them with discretion, from all select a few,
If diagnosis is correct, they'll aid and comfort you.*

SINNIG MAC.

TWO CASES OF HYSTERECTOMY

(Continued from page 32)

this time what was done by error previously. Therefore, she was operated on again, and after freeing the adhesions, a rapid hysterectomy was done, which was almost bloodless. The baby was extracted quickly and resuscitated with no more difficulty than in the average Cæsarean section. The mother and child had an uninterrupted convalescence and left the hospital on Feb. 26, 1927, in good condition. Both the negro woman and white woman nursed their babies.

In cases where sterilization or removal of the fetus should be done, I believe, from my observation of these two cases, that the same procedure should be followed, because it is as safe for the baby and safer for the mother.

NEWS ITEMS

Dr. J. Lee Kirby-Smith was awarded the honorary degree of Doctor of Science recently by the Board of Trustees of the University of the South, Sewanee, Tenn. This honor was bestowed on Dr. Kirby-Smith in recognition of special research work done by him in determining the etiology of creeping eruption. Dr. Kirby-Smith's research work of this condition has received international recognition.

Dr. John A. Simmons, our President, has just returned from a four-day trip through the central part of the state. He visited the session of the Medical Examining Board in Tampa and made a short address before the class of applicants. Later in the evening he met with the Board at the home of Dr. William Rowlett and discussed several questions vital to the medical profession of Florida. While on the same trip, Dr. Simmons visited the DeSoto-Hardee-Highlands County Medical Society in Wauchula and found it a very enthusiastic organization.

* * *

Dr. H. R. Weems, of Sebring, attended the clinics of Emory University at Atlanta, which were held in the early part of June.

JESSE WYLLIS HASSLER

Dr. Jesse Wyllis Hassler, age 60, of St. Petersburg, died May 29th after an illness of several weeks following an operation in Philadelphia. For some years, Dr. Hassler practiced in the summer at Belmar, New Jersey, and during the winter at St. Petersburg. He was a member of the Florida Medical Association and of the New Jersey Medical Association. For a number of years he was on the teaching staff of the Hahnemann Medical School. He was a man of most attractive personality, excellent speaker and had a very extensive practice. Dr. Hassler is survived by his wife, daughter and grandson.

JOS. W. TAYLOR, *Necrologist.*

Mrs. D. L. McSwain, wife of Dr. D. L. McSwain of Arcadia, suffered a stroke of paralysis early in June and is now in a very critical condition.

* * *

The School of Medicine of Emory University has opened at Wesley Memorial Hospital a free heart clinic for white patients unable to pay. This clinic will be under the direction of Dr. Stewart R. Roberts.

* * *

Dr. J. C. Davis, of Quincy, recently attended the surgical clinics held at his alma mater, Emory University, Atlanta. Dr. Davis at this time was honored by being elected vice president of the Medical Alumni Association of this institution.

Mrs. Sarah Rose, of Sebastian, wife of Dr. David Rose, was recently killed in an automobile accident, which occurred on the Dixie Highway. Dr. Rose also suffered painful injuries in the accident.

* * *

The Florida Hospital Association was organized in Jacksonville June 28th. The following officers were elected: Fred M. Walker, Duval County hospital, Jacksonville, president; Dr. J. A. McRae, James M. Jackson Memorial hospital, Miami, president-elect; J. H. Holcombe, St. Luke's hospital, Jacksonville, vice-president, and C. S. Myers, City hospital, St. Petersburg, treasurer. Hospital executives from the following cities were present or sent word of approbation and agreement to join the association: Bradenton, Gainesville, Jacksonville, Lake City, Lakeland, Miami, Ocala, Orlando, Pensacola, Sarasota, St. Augustine, St. Petersburg, Tampa, and West Palm Beach.

The Florida Hospital Association will be affiliated with the American Hospital Association and will represent the state officially at the national meetings. While only representatives of general hospitals are being invited to the organization meeting, those doing a specific type of work will be asked to join the association, it was announced. The constitution provides for three kinds of memberships: active, open to chief executives; associate, applying to department heads, supervisors and others of similar rank, and honorary. The honorary memberships will be granted those who have shown especial interest or have done outstanding work for a hospital or hospitals in general, the organizers said. More than twenty-five hospital officials attended the meeting.

Dr. Fred J. Walter, formerly of Florida, but for the past few years located in California, is at present motoring east and south. He will take some post-graduate work this summer and in October reach Florida, where he will relocate on the East Coast. Dr. Walter is well known among the profession, having at one time served as president of the Florida Medical Association. During his sojourn in California he has not lost touch with nor interest in Florida, as he has retained his membership in this Association. His many friends will welcome him back.

* * *

Dr. George M. Dawson, president of the Palm Beach County Medical Society, and Mrs. Dawson, have departed for a tour of Europe. Dr. Dawson will take post-graduate work in Germany. They expect to return in the early fall.

* * *

The regular meeting of the Duval County Medical Society was held at the Duval County Hospital in Jacksonville, June 7, 1927, Dr. Louie Limbaugh presiding.

One of the most interesting scientific programs of the year preceded the business. Dr. Shaler Richardson presented a case of glioma of the optic nerve. The patient, a young girl of seven years, who had undergone a successful operation, was presented for inspection.

Following this, there was a symposium on pellagra. Dr. Kirby-Smith opened the discussion from the dermatologist's point of view; Dr. Stanley Erwin gave the internist's point of view; Dr. J. H. Randolph, the neurologist's. Dr. Frank Wilson discussed the treatment and presented two pellagra patients who had been successfully treated with neoarsphenamin and diet.



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Dr. R. P. Henderson, of Tampa, while motor-ing near Ocala, suffered severe injuries to his back when his car was forced off the pavement. Dr. Henderson is in the Gordon-Kellar Memorial Hospital at Tampa, where he is recuperating. His physicians state that he will not suffer any permanent injury as a result of his accident.

* * *

The grounds surrounding the Good Samaritan Hospital in West Palm Beach are being landscaped and beautified. It is said that they will be the most beautiful of any of the public buildings in that vicinity.

* * *

The Volusia County Medical Society held a basket picnic at DeLeon Springs June 14th in place of the regular meeting. Roast pig, furnished by the county society president, Dr. Forster, and baskets by the members with fried chicken, salads, baked beans, sandwiches, pickles and cake with ice cream made up the very satisfying lunch. Twenty doctors and their families made up a goodly crowd of seventy-five who enjoyed the gathering so much that another picnic, to be held later in the summer at Daytona Beach, has been planned.

Dr. N. P. Myers, formerly of Palmetto, has located at Mayo, where he will act as physician and surgeon for the Standard Lumber Company.

* * *

Flagler Hospital of St. Augustine recently held graduating exercises for their training school. Five young women received their diplomas, these being the Misses Courtney Nicholson, Louise Ingle, Clemence Burgess, Pearl Pickren and Estelle Kuter. Diplomas were presented by W. W. Dewhurst, president of the board of trustees of the Flagler Hospital. An informal reception followed the graduating exercises.

* * *

The American Board of Otolaryngology conducted an examination at Washington, D. C., on May 16 and 17, and at Spokane, Washington on June 4. Of the 142 men examined at Washington, D. C., 119 were passed and 23 failed to pass the examination. In Spokane, the number passed was 46 and the number failed was 6. The next examination will be held in Detroit on September 12, 1927. The applications for examination should be sent to Dr. W. H. Loeb, secretary, 1402 South Grand Boulevard, St. Louis, Mo.

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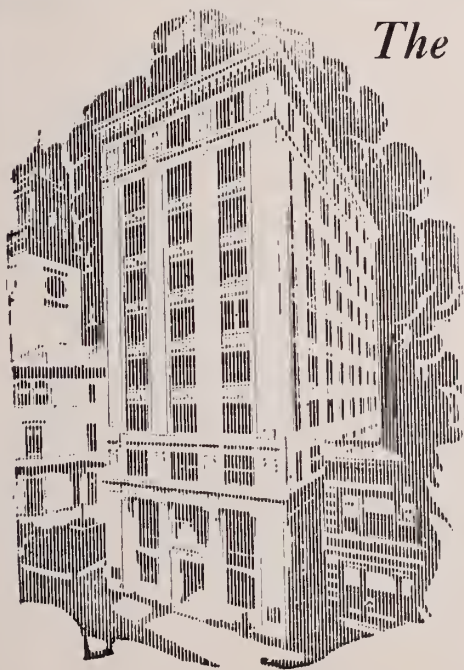
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* * *

The regular monthly meeting of the Suwannee River Medical Society was held in Jasper on the evening of May 16, 1927.

Colonel F. B. Harrall, in an excellent short talk, welcomed the visiting doctors to the city of Jasper and made them think it was good to be in his city.

After a good dinner and an enjoyable social hour, the scientific program was taken up. Dr Price, of Live Oak, read an interesting paper on Anesthesia in Childbirth, reporting several interesting cases.

Dr. Cone, of White Springs, read an instructive paper on Hydrophobia, relating two interesting cases that recently came under his observation.

These papers provoked a general discussion among the doctors.

The doctors present were: Eustace Long, President of the Society; L. J. Arnold, Secretary and Treasurer; James J. Beaty, J. H. Corbett, D. N. Cone, J. R. Bruce, J. M. Price, H. M. Strickland, Geo. O. Davis, A. L. Blalock, H. C. Von Dahm, J. D. Gable, Herbert Caldwell, E. A. Welch and C. C. Box.

* * *

A regular meeting of the Lake County Society was held in Tavares on Thursday, May 5.

Dr. C. McK. Tyre, of Eustis, was elected to membership in the Society.

Following the regular business of the meeting, Dr. M. M. Hannum, of Eustis, made a report to the Society of the annual meeting of the Florida Medical Association, held in West Palm Beach. Dr. Hannum appeared very enthusiastic over the success of the annual meeting. A further report was made by Dr. Hannum upon his attendance of the meeting of the Central Florida District Medical Society, at Ocala. The Central Florida District Medical Society, a newly formed organization, whose membership is composed of the doctors of the counties in the central part of the state, elected Dr. Hannum vice-president.



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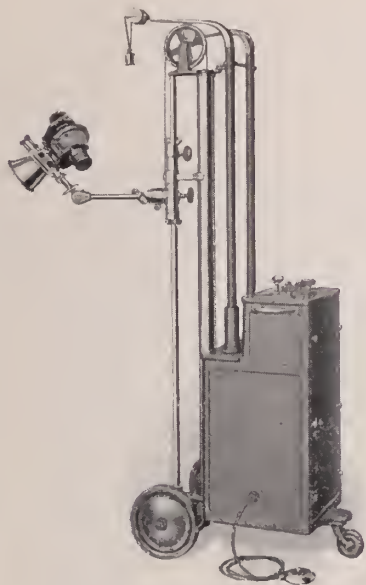


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The first edition (1906) contained 128,171 names of physicians in the United States, its dependencies and Canada. The new tenth edition includes 164,002 names. There is an increase of 2,644 over the previous edition. If the Directory were merely a list of names and addresses of physicians it would not have great significance. That information is valuable, but of far greater value is the fact that the Directory gives proof of the right of each physician listed to practice medicine—namely, time and place of graduation and year of license. In addition, society membership, specialty and office hours are included. Capital letters indicate those who are members of their county medical society, and a special symbol follows the names of those who are Fellows of the American Medical Association.

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* * *

Dr. W. J. Watters of Miami, Florida, and Boston, Massachusetts, was recently elected vice-president of the Massachusetts Medico-Legal Society at its annual meeting in Boston. This society consists of the medical examiners, doctors interested in legal medicine and lawyers interested in the medical aspects of their profession. Dr. Watters states that due to the fact that he has spent so much time at his clinic in Miami for the past two years, this honor came to him very much as a surprise.

* * *

The State Board of Medical Examiners held their semi-annual examination in Tampa on June 13th and 14th, at which time the credentials of sixty-eight applicants were reviewed by the members of the board. Sixty-five of these were approved and the applicants permitted to take the examination. Three were turned down, two on account of being graduates from classes C and B medical colleges. One on the grounds of his having been an unethical practitioner in his former state.

Dr. W. M. Rowlett had filed with the Board charges against eighteen physicians in which he asked that their licenses to practice medicine in Florida be revoked and their registration annulled, pursuant to chapter 8415 of the Laws of Florida, Act of 1921. Most of these physicians were among the number recently indicted by the Federal Grand Jury. However, to the great disappointment of the members of the Board and the physicians of the state, these charges were answered by the defendants, serving upon the Board the day previous to its meeting two separate enjoining and restraining orders, which temporarily prevented it from proceeding in their trial for revocation of licenses.

* * *

At a meeting of the Suwannee River Medical Society, composed of Columbia, Hamilton, Madison and Suwannee County Medical Societies, held at Madison June 10th, Dr. J. Knox Simpson, Jacksonville, addressed the Society on congenital hypertrophic pyloric stenosis.

Following Dr. Simpson's address, Dr. W. McL. Shaw, Jacksonville, demonstrated with lantern slides on the daylight screen certain phases of the condition.

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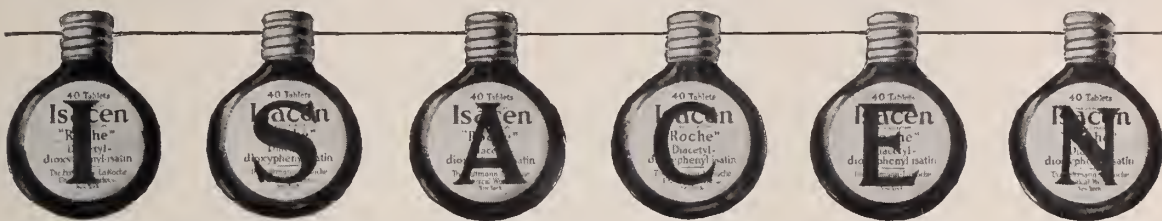
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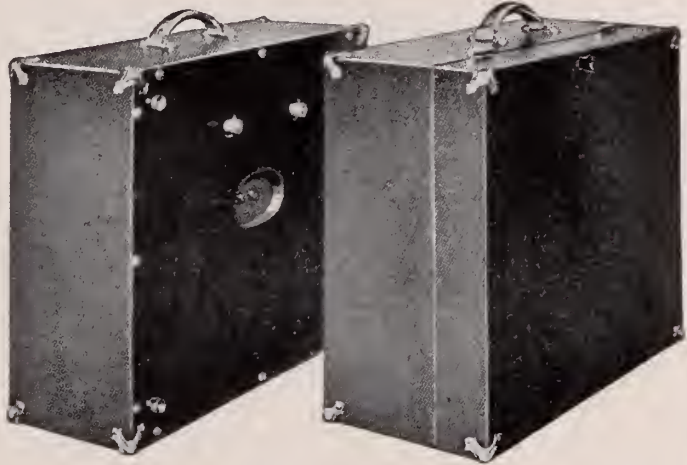
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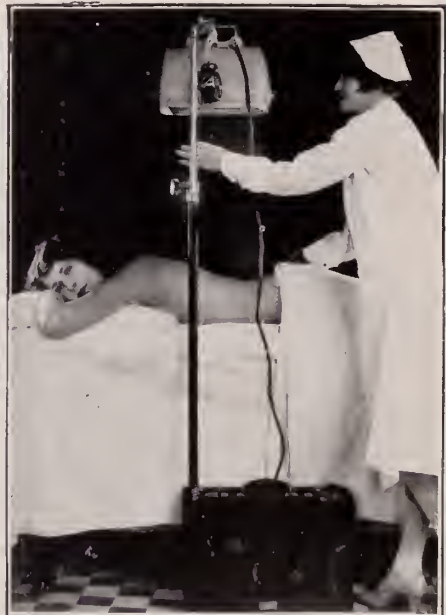
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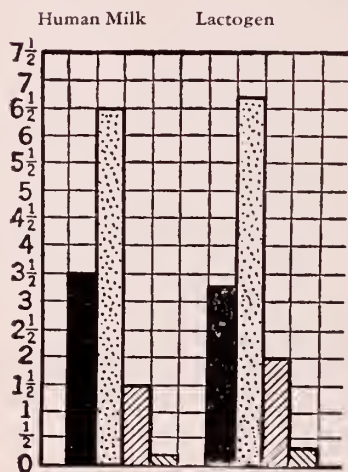
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—DR. HOLT, Page 178.

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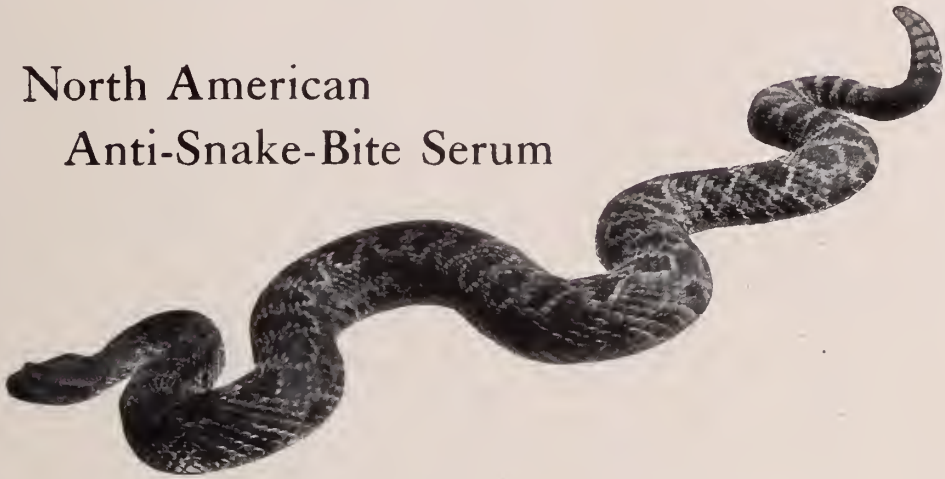
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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Number 2

CAESAREAN SECTION*

R. A. ELY, M. D.,
Tampa.

Cæsarean section is one of the most spectacular procedures in surgery. In scanning the literature of the last five years, one is impressed by the fact that the last word has not been spoken on this subject. The ultra-conservatives try to restrict the indications and the enthusiast obsessed with *furor operandi* goes to the opposite extreme. Some one has said that his indications are: the patient must be a woman, the woman must be pregnant and she must be unable to speak English. One well-known surgical obstetrician in eleven hundred and thirteen (1,113) deliveries had eighty (80) Cæsareans, or one in fourteen deliveries. This seems to be all out of reason. The writer in approximately one thousand (1,000) deliveries has done five. This makes one in two hundred deliveries. The discrepancy in these figures is obvious. While five sections do not warrant the writer to qualify as an obstetrical surgeon in the accepted sense, yet it seems the figures are of some value in showing what can be done by conservative and patient obstetrics. In looking back over this series the writer can not find where additional sections would have made any cases more favorable.

The indications as understood by the writer are: True conjugate of 6 to 0.5 cm. pre-eclamptic toxemias, eclampsia, abruptio placenta, previous Cæsareans, dystocia due to ventral fixations or tumors, cervical amputations plus plastics, some cardiacs and late primaparity.

Contracted pelves often deliver. Schauta found that in 5,288 contracted pelves, 77.8 per cent delivered with a maternal mortality of .09 per cent and an infant mortality 2.2 per cent. The writer in fifteen years has not had any case that could not deliver or be delivered by forceps. Pre-eclamptic toxemias in primaparas are best treated by the method for obvious reasons. Three of the writer's cases were of this type.

Eclampsia is treated on the continent and England more by the expectant plan, but the writer

shares in the American belief that section is the most satisfactory way out of the trouble.

Previous Cæsareans predispose to weak union of the muscle with subsequent rupture of the uterus in following pregnancies. Holland puts the percentage of rupture at 4 per cent. Watchful expectancy in a hospital at term is the only way of dealing safely with such a case. The writer delivered one nine-pound boy by the natural route after a section done three years before without any trouble, but there is a real danger.

Occasionally a suspension becomes a fixation and the mechanics of birth are so interfered that section offers the only relief. One of my cases was of this type.

Cervical amputations with plastic work often necessitate later sections. The writer has had one of this type in which the cervix just would not yield and rupture of the uterus was feared.

In some severe cardiac conditions section is safer, although the average cardiac case does very well in normal delivery.

Late primaparity, and this is the one that may be overworked the most by the unscrupulous operator. In a primipara past thirty-five, one must always consider this matter with fine judgment. In some of these patients, if the husband cooperates and they buy a pedometer and take long daily walks, this class can be narrowed and often deliver without trouble.

THE OPERATION

The question of the classical operation versus the cervical or low operation is the most debated question in this consideration. Each has its advocates. The writer did all of his by the classical way with no maternal or infant mortality. If the operator is reasonably sure that the case is not contaminated or gets it early in the first stage, the classical operation on account of the facility and time required is the operation of choice. One claims he can do it in seven minutes. Fifteen to twenty minutes is a fair time to do it safely. The extra peritoneal takes longer and its enthusiasts admit that there is danger of tearing into the body of the womb and into the bladder and it takes at least twice as long to perform it. In its favor are the lesser dangers of peritonitis

*Read before the 54th Annual Meeting of the Florida Medical Association, West Palm Beach, April, 1927.

hemorrhage and perhaps the scar will subsequently be more firm.

Before becoming too enthusiastic in recommending Cæsarean section, let the obstetrician pause at the mortality ranges from 2 per cent in early clean cases to 27 per cent in infected cases. Let him consider that this patient may die from peritonitis, septicæmia, pulmonary embolus, cardiac failure, hemorrhage or intestinal obstruction. That in one thousand (1,000) cases perhaps only five actually need Cæsarean and let not his unctuous, persuasive tendencies replace surgical and obstetrical judgment.

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DISCUSSION

Dr. E. G. Peck, Ocala:

I am very much impressed with Dr. Ely's paper. I think it is very conservative and states facts that we all should pay heed. As you well know, Cæsarean section is probably among the first abdominal operations we have on record. It was practiced by the Greeks and Romans, I believe, as far back as 120 B. C. There are few other records of surgery previous to that date.

Dr. Ely's record in regard to the percentage of Cæsarean sections matches up with mine fairly well. Somewhere in 1,100 I think we had eight, which was very conservative, and I felt we did all that were necessary. A man doing a Cæsarean section is handicapped very much compared with other surgical operations. You well know if you have to do a Cæsarean section, you haven't time to study a case very elaborately. We have to take these cases frequently; as in my town, we have cases brought thirty or forty miles, who have probably not seen a physician since conception, and we have to act and act quickly. In a city, most of these cases are in the hands of physicians from the very first, and they have time for study of case. Again, I want to thank Dr. Ely for his paper. I appreciate it very much and I think all of us do. In the recent years, the literature shows Cæsarean section not as necessary as thought previously.

Dr. Emil Lustig, St. Petersburg:

I am much impressed with the doctor's paper. My friend, Dr. Potter, of Buffalo, as you all know, has done some brilliant work in Cæsarean section, but his remote results are not so good. Today he is advocating version for almost everything. Now you men who are doing obstetrical work should not be stampeded into the idea that a woman needs a Cæsarean section. I think that if you will make a measurement of the pelvis, and it is easily done with the two fingers, if you don't feel the promontory, you are comparatively safe, providing you are not dealing with a tumor or growth. The occipito-posterior presentations I think give us a good deal more trouble than any other. If you make a diagnosis and the membrane is intact, I think the best thing is to do a version. There is no great difficulty in that. The main thing is to go in far enough to get control. Another advantage is you can tell by feeling the cord whether the child is alive. This is a great advantage.

If, on the other hand, your occipito-posterior is in the pelvic cavity, what are you going to do about it? The woman has probably been in labor many hours. Probably a good many of you will apply forceps, but you don't make any headway. If you have an occipito-posterior, feel for the child's ear to make sure of your diagnosis. What you want is flexion of the head. This is best produced with your whole hand in the vagina, using the necessary force. To maintain the flexion, you may have to repeat this procedure. A flexed head will rotate, sometimes even at the outlet. Leave the case to the patient's own efforts, giving her plenty of time. Extracting an occipito-posterior without flexion will give rise to great difficulty, and may be impossible.

Dr. W. M. Rowlett, Tampa:

After listening to this excellent paper of Dr. Ely's, and the rousing encore he received, I arise with a good deal of reluctance to discuss it, for fear I will be deemed a dangerous radical, rather than a sane progressive. But we must admit that as long as women with abnormal conditions insist on having babies, obstetricians must resort to other than normal deliveries, and if we are going to uphold the tenets of the church and the teachings of the founders of our profession, we have got to do more than is being offered to the unborn baby in the abnormal conditions, giving the baby its just right in the contract. The battle

cry is not too many Cæsarean sections, but too many Cæsarean sections by unskilled men and for insufficient reasons.

Every year I spend a month during the summer in the New England States, and it seems to me that every doctor up there is resorting to Cæsarean sections. It is such conditions as that that has given the Cæsareanist a black eye.

There are three real indications for Cæsarean section, contracted pelvis, eclampsia and that of placenta previa, although I will confess I have performed a Cæsarean section on three cases of illegitimate pregnancy in order to conceal the pregnancy and give the girl another chance in life.

Perhaps you wonder about future pregnancies, as Dr. Ely told you only 4 per cent of these cases result in rupture of the uterus. There are three ideals to be observed, the prevention of infection, a well united uterine and abdominal incision, and leaving the patient in good condition for future pregnancies. To reach these ideals, there are two things you must do, you must be trained in special surgical technic and surrounded by capable assistants.

Dr. F. Waas, Jacksonville:

I am certainly impressed with Dr. Ely's plea for conservatism in Cæsarean section. Several years ago, before our State Association, I read a paper on the indications for Cæsarean section, and I feel as Dr. Ely does, it is a very serious procedure and in many cases a most abused one. I am not going to discuss the indications, but am very pleased to hear the doctor speak about the posterior occiput. There are many who do a Cæsarean section for this condition, but I think at least 90 per cent of them can be delivered spontaneously.

I want to say a few words about the operation itself. The doctor mentioned his procedure. It has been my experience to have done a lot of Cæsarean sections and the operation I like best is the one with the supraumbilical incision. One thing you will not get in the supraumbilical incision is the fixation you so frequently get in the infraumbilical incision. With this method, you so often get a definite fixation in many instances between the uterus and abdominal wall.

In infected cases, the extraperitoneal operation is certainly the operation of choice. It is a very delicate operation, but the most beautiful procedure, and in infected cases I do think this is the operation of choice.

Dr. J. S. Turberville, Century:

I am glad to see some of the gentlemen bring out the indications for operation, because I think here is where the crux of the situation is. I am inclined to agree with Dr. Rowlett that we are not having too many, but too many done under improper conditions. I have done a good many Cæsarean sections in my life, and will have to plead guilty to doing many under unfavorable circumstances. I don't understand why the mortality rate is so high in some of the larger hospitals, Cook County, for instance. We don't get that in this region, and I have wondered why this is true.

I think that the doctor has pointed out the indication so clearly that one would not be led into doing the Cæsarean section in unsuitable cases, if his advice is followed. I think posterior positions generally take care of themselves.

When I have contracted pelvis, and eclamptic conditions in primipara in which there are no indications of labor, and in which there is evidence of great toxemia, as suggested by rapidly developing icterus, we are left no choice. Cæsarean section is, then, imperative.

In placenta previa, I am not so sure that we are often justified in doing Cæsarean section. A great number of these cases take care of themselves, but if you have a frank placenta previa, you have extreme hemorrhage, and something must be done at once. In the latter instance, I think I would prefer Cæsarean section to the usual methods of treatments, because I can do it quickly, and feel more certain of what I am trying to accomplish.

Dr. Maurice Heck, DeLand:

Dr. Ely early in his paper mentioned the mortality rate and the number of infected cases in making a plea for conservative operations. I have not had a very wide experience in this field, although I have done a few, but I would make a plea for less examinations. If more of us would examine less, or adopt the technic of rectal examinations, or make proper examinations before the onset of labor, I think we would have a smaller number of infections and lower mortality rates with our Cæsarean operations. I agree with Dr. Waas that in the clean cases we should select the high incision, above the umbilicus, because the contracting uterus is below the line of incision.

When there have been frequent examinations,

the choice then would be the lower or so-called extraperitoneal incision.

Dr. Homer Pearson, Miami:

The thing that impressed me most with Dr. Ely's paper, I think, was his percentage of Cæsarean sections. I feel Dr. Rowlett did not cover quite enough territory when he said these promiscuous Cæsarean sections are being done in the New England states. I think that is true also of other sections of the country, even in certain sections of Florida.

I think one of the important indications for Cæsarean section is fetal distress. I think Dr. Rowlett is perfectly right in his statement that we probably do not give as much consideration to the unborn babe as we should.

In the Cæsarean section in eclampsia cases, I like the conservative treatment up to a certain point, and after that, it becomes a definite indication for surgery. I feel that the section should be done before the patient goes into convulsions. Sometimes you find in these cases with extremely high blood pressure, if you go in and rupture the membranes, the patient will deliver spontaneously and even before she delivers, the blood pressure will fall rapidly and in that way we can save a Cæsarean section.

Dr. C. D. Christ, Orlando:

I am very glad to have heard this paper. I would appeal to all our brother practitioners, midwives and obstetrical nurses to put on a glove and make a rectal examination and keep the fingers out of the vagina. One reason I think for the high mortality rate at Cook County, Johns Hopkins and other large institutions is that in the congested habitation of man, there are more bugs. That was visibly brought home to me when I was a boy. An old fellow one day went into a fence corner in the woods and tried to commit suicide by slashing his abdomen. When he was found lying there on the leaves, the whole abdominal viscera were exposed. I know, for I found him. I rode fifteen miles to get a doctor. The doctor came and sewed that old man up without any sterilization of anything, and he got well without any complications. I repeat, the more people, the more bugs.

Dr. R. A. Ely, (closing):

We have had a delightful discussion and I am very happy, indeed, to see so much interest taken. With regard to the percentage of mortality given, the bibliography of this paper represents about fifteen of the best obstetricians in this country,

and my statistics are simply a digest of their findings. I had this paper discussed by a professor of obstetrics and he said he had lately had a case with a dermoid cyst, which is another unusual indication. But I think if we stick to these indications pretty closely we will practice obstetrics fairly.

I have not found that with careful examinations with gloves you are apt to infect the patient. I agree with Dr. Freeman that probably by carelessness on our part in not using gloves we infect our patients.

DISEASES OF THE KIDNEY*

STANLEY ERWIN, M.D.,

Jacksonville.

This discussion is made in a broad and somewhat loose manner. Detail as far as possible has been eliminated, because of the impossibility of presenting diseases of the kidney in one paper and following any special detailed method. This is especially so in treatment and in describing secondary body changes including blood chemistry. Facts have been presented and conclusions made from these facts and then applied as principles. Disease or pathological change in the kidney, is of itself a secondary manifestation and is always followed by other complicating mechanical defects; the so-called residual pathology. This never-ending chain of cause and effect is a problem of mechanics and chemistry which cannot be solved or relieved by the old empiric rules of medicine, because diagnosis and treatment is based, first, on the primary infection or toxemia; second, the kidney change itself, and third, the complicating over-compensation seen in other organs following kidney pathology. This very definite syndrome of the kidney may be roughly but practically divided into two classes. (1) The nephritis or acute and chronic glomerular nephritis, chronic tubular nephritis, and many varying, overlapping combinations of these two types of nephritis. (2) Nephrosis, which is a conglomeration of many degenerative kidney changes occurring without renal tubular inflammation but due to a constant low grade irritation. Again roughly, and this time symptomatically, dividing and differentiation; there is kidney disease with increased arterial tension which is usually nephritis, and that with normal

*Read before the June Meeting of the Staff of the Duval County Hospital, Jacksonville.

or lowered arterial tension which is usually nephrosis. Bearing these working divisions in mind we will, in order to study this subject intelligently, have to consider renal physiology and pathology, because this pathology or abnormal, checked against the physiological normal, is the starting point of all true observation made for diagnosis, treatment and prognosis. Pathological changes in a kidney cause such definite signs and symptoms or changes in renal function that these signs, symptoms, and changed renal function compared to the normal physiological renal function will usually diagnose and differentiate the type of disease present. (1) The modern conception of the physiology of renal function is that the kidney is not an organ of secretion, as no nerves whose function is secretory have been discovered going to it; that it is a simple filter with reabsorption properties, that the glomeruli, especially Bowman's capsule, constitute the filtration apparatus, while the tubules constitute the organ of reabsorption, so that when too much water and valuable chemical is filtered out by the blood serum by Bowman's capsule, the excess of water and chemical is reabsorbed or returned back into the blood serum by the tubules. This fine division of power or labor, if balanced, maintains a blood serum of a normal chemical composition and gives a urine of adequate consistency, which allows or causes a chemical harmony that in turn produces a physiological unity of all body organs. It is obvious that there must be a large physiological range in normal output, this depends upon and is governed by the necessity, regardless of other body states, of always keeping the blood serum clear of irritating and metabolic poisons and maintaining a normal in blood serum saturation and reaction. This enormous amount of responsibility and work is renal function. Continued deviation from the chemical normal in the blood serum due to body pathology, especially general infections and changed function, mainly of the liver, which the kidney is unable to correct, is the cause of failing kidney function or disease. (2) The above physiology shows that when the glomeruli, especially Bowman's capsule, is diseased and blocked with cell debris, it cannot filter out water and salts and it allows some serum as such to escape, then there is fluid retention and oedema, a scant urine with high specific gravity containing albumen, casts, and blood cells. The resulting blood serum change is characterized by metabolic end product

retention in increasing concentration, associated with tissue water logging. This describes acute and chronic glomerular nephritis with resulting nephritic acidosis and definitely shows where, why and how signs and symptoms originate. Glomerular inflammation is of an acute, bacterial or toxic origin. It follows acute infection and its toxemias, this is seen after, acute tonsillitis, scarlet fever, and diphtheria; and acute poisoning by mechanical irritants as, ether, methyl alcohol, or bichloride poisoning. Acute glomerular nephritis is not always bilateral and does not always involve all of one kidney. It is very similar to pneumonia, variable in extent or area; the pathology of both is block, in one the air vesicals, in the other the glomeruli. This is explained by bacterial tests or infected emboli. Bacteremia or intense toxemia always results in bilateral total glomerular involvement. If the tubules are diseased and fail to reabsorb the excess of water and salts filtered out by the glomeruli then there is a nephritis without edema, but with an increased urine output of a low specific gravity containing little or no serum albumen and few casts or debris. The increased fluid loss causes a chronic dehydration and consequently an acid retention in the cell, a resulting blood serum upset due to improper cell serum exchange, a dehydration resulting in a chronic acidosis. This last description is chronic tubular nephritis or the common cardio-renal vascular disease. Tubular nephritis is caused by a chronic slow toxic irritation not of sufficient intensity to cause inflammation of the glomeruli. This occurs following gastro-intestinal toxemias, as seen in chronic gall-bladder and appendix disease, prolonged stasis of the duodenum and other intestinal motor blocks, improper food balance with predominating protein and fats, cell toxemia with fatigue poison either from too much or too little exercise, chronic infection of the teeth and tonsils and deranged liver function. All the above really means metabolic disturbances causing toxemia. The time-honored principles of physics governing osmosis and filtration under pressure, the modern principle of forcing a diminished plant to perform labor far above its capacity, applied to glomerular and tubular nephritis, readily explains the necessity of maintaining an increased blood pressure. This is the compensatory hypertension of nephritis. (4) *Nephrosis* is a degenerative state. Its pathology is that of chronic cloudy swelling, amyloid de-

generation, fatty degeneration and infiltration, chronic in type and slow in progress. The old, chronic parenchymatous nephritis was nephrosis. In nephrosis both the glomeruli and the tubules are damaged. Endothelial cells of the whole kidney parenchyma show change, either fat globule infiltration, microscopical necrosis or changed construction with connective tissue replacements. Because of equal damage there is no characteristic loss of function of either glomeruli or tubule, the damage is of a balanced degree and free from inflammation. Water filtration is not markedly impaired or reabsorption abolished, in reality there is diminished endothelial activity with breaking down resistance which allows serum leak, as such, giving approximately a normal amount of urine of varying specific gravity full of albumen and debris. These are the patients who have a very bad urine, but show very little change in renal function. The lack of need for arterial hypertension is readily seen. Nature does not supply unneeded effort. Nephrosis is caused by chronic cell poisoning from alcohol, syphilis, slow chronic infection, and is best seen in chronic lead, bismuth and mercury poison. Formerly syphilitic mixed treatment, now "shine" is the cause of a large percentage of the nephrosis now seen. There are other varieties of kidney diseases, which are not a part of a general body disease as are nephrosis and nephritis, but are real diseases of the kidney confined to the kidney. These are surgical, and include tuberculosis, malignancy, other new growths, stone, abscess, the back pressure nephritis of prostatic disease and urethral stricture. These we leave to surgical discussion, as their diagnosis is made only by clinical elimination during general physical examination. The diagnosis of kidney loss of function due to disease must be classified or divided into two parts or stages; the first, that of the local kidney change and its symptoms and signs has been presented, as it is a part and parcel of renal physiology and disease classification. The knowledge of renal physiology and pathology applied to renal function, normal and abnormal, checked properly, makes the local pathological change clear. Careful history taking and thorough body examination will establish the etiological and residual pathology. We are now square up against the real difficulties of comprehending and arresting kidney disease or the second stage of diagnosis. This is the estimation of the blood serum change

due to failing renal function, also the general body, organ, cell and tissue change resulting therefrom. The blood serum is the only means of communication between all the organs and cells of the body. Cell and organ activity is stimulated or depressed by the blood serum contents and reaction. Food and waste products are carried in and brought out by the blood serum. All defensive reactions and gas exchange is dependent on the whole blood. An exact knowledge of blood serum, cells, and flow now become a necessity. Blood chemistry has established the fact that certain salts and chemicals occur in solution with definite reaction; in normal blood serum these are always within a definite variation. This variation is in proportion to the chemical composition and amount of food eaten. In the abnormal or kidney patient the variation depends on the amount and kind of food eaten, plus the liver failure to destroy and change, and the kidney failure to excrete. The arrangement of the retained salts or nitrogenous ends, indicates the type, kind, and amount of kidney failure. There are many nitrogenous ends and salts in the blood. Clinicians value these differently. I personally think urea, non-protein nitrogen, creatinin, chlorides, and sugar are the most valuable. Other observers differ. The cytological estimate of the blood gives the amount of malnutrition and defensive reaction present. Terminal pathology is due to faulty or dirty blood serum causing constant increasing cell irritation; increased heart work, overtension of the blood vessels and overwork of the liver. Body examination becomes a constant necessity. X-ray and mechanical estimation of heart size, and action, checking of the aortic arch, the understanding of compensatory pathology in the heart, careful check on the eye ground changes. Here the vessels can be seen and an estimate of capillary, arterial and vein damage can be made during an ophthalmoscopic study. It is necessary to have a cooperative opinion from the chemist, roentgenologist, ophthalmologist, and dietitian before kidney diagnoses is completed to the extent of comprehensive treatment and progress. The treatment of any disease must lead to a definite objective. In kidney diseases, this objective is a normal blood serum. This is the whole thing condensed. The permanent relief of complication and symptoms is impossible, unless the blood serum is approximately normal; of course a nitrite will reduce a blood pressure for a few hours or luminal will relieve a sleepless

night; purgation, an impending toxemia, many forms of empiric treatment will temporarily relieve and seem to help a nephritis. It is this temporary improvement that is responsible for much of the total heart decompensation seen in nephritis. Usually it is a headache, frequency of urination at night, the accidental discovery of high blood pressure or albumen in the urine that brings the nephritic to a doctor. High blood pressure and its reduction is a very fertile field of endeavor for many physicians; few really realize that high blood pressure is a compensation by the body to supply more blood, or push more blood through a damaged filter and cannot be reduced beyond a certain point of safety. High blood pressure of itself is very rare. The compensatory hypertension of nephritis is largely responsible for the general sclerosis of nephritis, and is the exciting cause of hypertensive aortic diseases, also aneurism when not syphilitic. This is so well established that many clinicians tentatively diagnose tubular nephritis in all aortic diseases in the absence of syphilis. There are many types of treatment in nephritis. If scientific, they are all based on the fact that glomerular and tubular damage lessen renal function; consequently metabolism must be changed to the same degree as the lessened renal function. This is accomplished by, first, getting an adequate estimate of renal activity over a certain period of time when the patient is taking a normal diet, at the same time estimating the concentration of nitrogenous wastes in the blood serum, then reducing the diet and changing its chemical composition to the point where the kidney is doing adequate work. At this point urea, urea nitrogen, creatinin, chlorides, and sugar approximately approach normal. Body activity is also reduced to compensate with lessened food supply. Complications are adequately treated during this period of rest. This is the basic state, equal food of equal chemical content, equal renal output, normal serum. After sufficient time the kidney will improve, endothelial cells regenerate, and all symptoms and signs diminish; then more food properly balanced to the improved body and kidney state, added. The above with variations describes all the modern treatment of renal disease. Of course, it is understood that an old decompensated heart requires digitalis, a malignant hypertension reduction, and all infection or back pressure relieved. Lately much has been written on liver function and kidney disease; this opin-

ion is based on a very sound premise, that more than half of the renal disease is due to the failure of the liver to do its work of destroying or changing nitrogenous ends to compounds that can be eliminated. Mosenthol, Sansone, Mix, Joslin, in fact each one of the authorities on metabolism has a special diet and treatment. Sansone balances acid and alkali ends, with a salt free low protein diet; Mosenthol gives urea. Both get good results, but both have the peculiar ability of properly classifying their patients. No two nephritics can have the same diet and treatment; each must be worked out and given individual treatment. Details of diet change, blood chemistry estimation, renal function tests, drug administration would require too much time and effort to try to cover here. Do not rely entirely on the p. s. p. output as a check on elimination; it is only one of the many tests needed. The treatment of acute nephritis with urine suppression is the one emergency in kidney disease that demands instant, old-fashioned medical treatment. Water given as normal salt under the skin, glucose in the vein with caffein and digitalis, if heart failure is present, have given good results. Drastic diuretics work best in cirrhosis of the liver, or the cedema of heart decompensation. They are dangerous in glomerular nephritis.

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DISCUSSION

Dr. R. H. McGinnis, Jacksonville:

I am glad Dr. Erwin has dwelt somewhat on the physiologic-pathologic phase of chronic nephritis, as our knowledge of the physiology of the kidney is limited. The concensus of opinion, at present, is that the kidney is an excretory organ. Whether it has a secretory function we do not know.

A good working classification of chronic nephritis is one advanced by Dr. Christian of Boston—that is: nephritis with edema; nephritis without edema. Those cases with edema we feel, at present, retain in the system a greater amount of the chlorides, especially sodium chloride, than the cases without edema.

In estimating the kidney damage in nephritis, many factors must be considered; the retention of various nitrogenous products, the chlorine and calcium salts, the kidney function test, the

intake and output of fluids, the specific gravity of the urine.

When there is a constant fixed low specific gravity of the urine over a period of twenty-four or forty-eight hours, there is strong suggestion of kidney impairment. A specific gravity of the urine of 1010 or below in every specimen of urine voided in twenty-four or forty-eight hours means, in a large proportion of instances, if there is albumin present, kidney damage.

The treatment of chronic nephritis is largely dietary with rest, physical and mental. We ought to avoid too strict a non-protein diet—give sufficient protein to keep the balance of protein absorption and elimination so that the body will not feed upon its protein reserve. Strict salt-free diet is objectionable because of its unpalatability, yet salt should be limited until science determines whether salt is detrimental. Elimination by the bowels is useful.

Dr. Louie Limbaugh, Jacksonville:

I feel that Dr. Erwin has rather belittled the value of the P. S. P. test. I do not consider it of great value alone in the prognosis of kidney disease, but I do feel that it has an important place in the study of a given case. The value of the blood urea or blood non-protein nitrogen depends upon one's preference in the matter. They are probably of equal value in interpretation. I feel that the combination of P. S. P. test, blood urea and creatinin and the so-called modified Mosenthal test for fixation of the specific gravity is of great value in diagnostic studies. I feel, too, that the microscopic study of the urine at frequent intervals is of value if done carefully by the clinician himself. In this manner, he can have personal observation of the type and number of casts.

I am sure we all realize the large subject which Dr. Erwin has undertaken in one paper and I feel that he has presented this resume in a splendid manner.

Dr. Shaler Richardson, Jacksonville:

Albuminuric retinitis is a condition which shows the kidney disease is affecting the retinal vessels. Most frequently, it is associated with contracted interstitial nephritis although at times it accompanies a large, white or amyloid kidney. It occurs occasionally in acute nephritis associated with specific fevers and the albuminuria of pregnancy. As a rule, it occurs in patients over the age of 40, but may occur as early as the age of 5. When found, the prognosis as to life is

bad, the patients usually dying within two years of the onset. However, this prognosis does not hold true in the retinitis accompanying acute fevers or toxemia of pregnancy. The salient points noted by ophthalmoscopic examinations are as follows: white retinal exudate around the disc and in the macular region, edema of the retina, blurred optic disc, retinal hemorrhages, sclerosis of the retinal vessels. The exudate which occurs is highly albuminous and may be subretinal or intraretinal. Subretinal exudate may produce detachment. If intraretinal, it occurs in the nerve fibers or intranuclear layers. In the macula, the exudate assumes a stellate arrangement. Edema of the nerve head is usually present. In chronic nephritis, frequently the only findings noted with the ophthalmoscope are sclerosis and retinal hemorrhages. The severity of the retinitis bears no fixed relationship to the intensity of the kidney disease in nephritis. Disturbance of vision may occur other than that caused directly by the retinitis. Toxins in the blood may affect the visional center, producing blindness with no evidence of fundus changes. This occurs in uremia.

MALNUTRITION OF INFANTS*

J. H. BICKERSTAFF, M. D.,
Pensacola.

In dealing with the subject of Malnutrition we touch upon almost every abnormal phase of infant life. Digestion is so closely related to every other function that one cannot speak of any pathology or abnormality in infancy that would not touch upon child nutrition. My purpose is to deal briefly with our present etiologic factors, and to prevent and remove, if possible, rather than to discuss the physiology of digestion.

By recognizing early the abnormal, and interpreting Nature's warning, we have our only hope in reducing the high infant mortality due to malnutrition.

Generally the infant speaks in terms of bowel movements, or vomiting, loss of weight, of restlessness—abnormal or subnormal development—to recognize these conditions early and properly interpret, the greater are the chances for a cure.

In the broadest sense, nutritional disturbances

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are due to a disproportion between the nature of the food and the ability of the organism to digest and assimilate.

Some physicians consider the etiology of malnutrition as being due to one or all of three primary causes: 1. Food. 2. Infection. 3. Constitutional disturbances or weakness.

At the present, the food is the greatest disturber, caused by our modern mode of living, and is becoming more and more a potent factor. Nowadays as the mother has regained her strength, she thinks of her social obligations, then she begins to look for excuses to give the bottle to the baby—if not a complete weaning, at least one or two relief bottles, which to our mind is the beginning of a rapid weaning. The number of relief bottles soon increases, for as the milk only appears in the mother's breast directly as it is made to do so by the periodical sucking of the baby, and it then consequently disappears in direct proportion as the function is omitted.

The artificially fed brought to our service suffering with malnutrition, overfeeding in quantity and quality and frequency has been the most common cause. At first the baby seems to gain, but soon digestive disturbances follow, and every known proprietary food is tried. If the quantity alone is in excess, regurgitation and vomiting are early symptoms, but if the quality of food is not well tolerated, these are followed by a train of symptoms depending upon which is the offender, namely, the fat, the protein or the carbohydrates, while if frequency of feeding is the trouble, training of the mother is the only remedy. We will consider these quality factors in order of occurrence.

Fat.—When this is given in excess of tolerance it usually causes vomiting, which occurs one-half to one hour after feeding, and the vomit is sour. It may also cause either diarrhea or constipation. When the bowels are loose, the stools are acid, greasy, and green in color, containing lumps of fat and mucous. The acid in the stool is due to the fat breaking up into fatty acids, and these fatty acids irritate the bowel, increasing peristalsis, and diarrhea ensues.

When the fatty acids combine with mineral substance of the body, and the mucous of the intestines, typical soap stools are formed, when instead of diarrhea, constipation is present. The stool, when constipated, due to fat, is foul smell-

ing, whitish or grayish in color, is very greasy and sometimes blood-tinged.

The urine in fat disturbance is highly ammoniacal, and very alkaline in reaction, due to the excess amount of fatty acids entering the blood and being neutralized. Both the stools and urine are highly irritating to the skin.

Carbohydrates in excess frequently cause watery, acid stools, accompanied by a great deal of flatulency and colic. The bacteria action in the stools frequently causes fermentation to take place; this will cause increased peristalsis, and a fermentative diarrhea follows.

Protein in excess causes symptoms mainly referable to the intestinal tract. Vomiting is rare, and if it is present, is in the form of a large curd, cheesy in appearance, which is not sour as in fat or carbohydrates excess. These curds vomited of proteids are tough, yellow or whitish, and very small pea or bean like. The stools are constipated, although they may be loose and green, but do not have a foul odor nor irritating properties.

The underfeeding in quantity and quality also occurs very frequently. Occasionally a baby fails to gain on the amount of food which ordinarily satisfies another infant of the same weight and age. This depends on the baby's ability to assimilate what it ingests. Insufficient amount of food finally calls on the reserve of the body, and inanition follows.

Although these individual food elements are thus considered as causes, the greatest writer on protein milk, Finkelstein, well emphasized that these alone cannot be entirely considered as primary cause of nutritional disturbances. These disorders are rather the results of faulty accumulations of various elements. There are some biologic properties in human milk not found in cow's milk, and even though the elements in each are exactly the same, it must be remembered that milk is not only a food but a medium in which ferments and cells carry on their digestive processes, and that these ferments must be dealt with separately from the individual elements in the milk.

Now we come to consider infections, as a cause of malnutrition. The infection may be internal, or it may occur within the alimentary tract, or parental, that taking place outside of the alimentary tract, such as furunculosis, otitis-media, bronchopneumonia, and some other con-

ditions. Internal infections, even though predisposed to by previous nutritional disturbances, are usually followed by atrophy and marked intolerance for food.

With a food intoxication, fermentation follows, infection sets in and the usual picture of intestinal injury.

The occurrence of fevers in these alimentary infections is believed by physicians to be due to decomposition of protein substance, while Finkelstein believes it to be fever depending on dehydration of the intestinal mucosa.

It is very important to be able to differentiate the kind of fevers of alimentary origin and of infectious origin within the intestinal tract. If the temperature is due to intoxication from food alone, withholding the food for about twenty-four hours or such matter will bring it down; but if the temperature still persists, alimentary disturbance plus infection must be considered.

Now we come to consider constitutional defects. These, when present and unrecognized, cause the weight of the infant to remain stationary, in spite of sufficient quantity and quality of food. You may have vomiting, flatulence, restlessness and loss of appetite, all ascribed to the defect in the mother's milk, and the baby is weaned. Then we put the baby on various foods to try them out, but the baby shows no improvement. We then, by clinical observations, show no improvement either by quality or by quantity of the food, but the constitutional state of the child causes the disturbance.

The exudative diathesis, as it may be termed, is one type of constitutional disturbance. The symptoms in these are very similar; children usually have eczema, a peculiar growth of the hair, dry skin and subject to colds, and sometimes have a very peculiar tongue, called the geographic tongue. In these cases the nutritional disturbances are very complex.

There is another class of cases which does not do well or thrive, comprised of a neurotic origin. Here the family history will show that all the children have some nervous symptoms in the same way, where the parents have suffered from headaches, neurasthenia, etc. Some doctors can almost diagnose this class as they enter the room. Dr. Apt so vividly pictures it when he says the atmosphere is tense and sparkles, when the

mother is in the air or on her toes, and she speaks in high tone of voice or fairly shouts, and speaks very rapidly or incoherently. All in one breath she tells you about the baby and how she suffers with so many discomforts herself. The father thinks of the grave condition the baby is in, and the mother is about to become a nervous wreck, and his business is about ruined. Then possibly some near relative takes a hand in the affections and opinion as to the case. This is the environment the babe is placed in to be reared, with already a neurotic taint.

There are forms of congenital anomaly to be looked for as potent factors in malnutrition, such as tuberculosis, syphilis, congenital rickets, pyloric spasm or pyloric stenosis, and endocrine disturbance.

TREATMENT.

My most important message to you for reduction of infant mortality, due to malnutrition, is to conserve the human milk. Unless you are yourself aware of the problems of artificial feeding, you cannot hope to convince the nursing mother of her duties to her baby. We are often called to see an infant suffering with malnutrition, where the obstetrician or midwife places the child on a formula with a moment's consideration. I dare say if we had a greater cooperation between the obstetrician and pediatricist, the results would be far better in a great many respects as to the welfare of the children. With a child who has gone through the various stages of vomiting, diarrhea, loss of weight, and dehydration our success in these cases is to be looked for only by close cooperation. It is before permanent injury to the infant digestion and metabolism has occurred that we may hope to raise a healthy baby.

It is well to inform the mother that it takes about two weeks for the maternal milk supply to properly establish itself, and it is during this time that the hygienic care of the mother, and of her breast, will often determine whether or not the baby shall be breast fed or bottle fed.

When human milk is insufficient in quantity, we are of the opinion that complimentary rather than supplemental feeding should be instituted. In other words, we feel that if the mother does not supply a sufficient amount at each feeding, the required amount of cow's milk should be given at once rather than replace a breast feeding by the use of a bottle.

To be successful in managing cases of malnutrition will, as you see, depend upon discovering the cause, and a careful history is a most valuable aid in doing this. From the history you will be able to gather whether or not the child has been underfed or overfed; the kind of food; the hereditary taints; the hygienic surroundings; the methods of preparations of food; the frequency of feeding; the character of the stools, etc. Physical signs on examination will reveal any rickets, pylorospasm, tuberculosis, syphilis, degree of emaciation and dehydration, and any excoriation, and determination of any focus of infection.

When dehydration is marked and vomiting has persisted, my best results have been obtained with gastric lavage with 5% bicarbonate soda solution once or twice daily, permitting a few ounces of the solution to remain in the stomach after lavage. In more severe cases the intraperitoneal administration of salt solution has undoubtedly been a life-saving measure. I have resorted very little to this measure on account of adverse family criticism. This method has to be done very carefully or you will have marked abdominal distention, probably due to sterile peritonitis, but it will quickly subside.

For stimulants we rely mainly on brandy, if it can be procured. Atropine has been invaluable in the control of vomiting of pylorospasms and colic. I usually start with one drop of one to one thousand solution, but I do not hesitate to push it to its full physiologic effect. I use calcium bromide in doses of from two to ten grains, depending on weight and age of the child, in these very highly nervous and neurotic types, especially where the intestinal pain and colic is severe.

With an initial course of calomel, followed with some saline or other laxative, it always helps where putrefaction and fermentation exist. There are a great many physicians who do not approve of the calomel in such cases. I feel that small doses of calomel do not irritate the bowels or effect the mucous membrane, but stimulate the flow of bile, and thus inhibit the bacteria.

Unless we are dealing with starch injury, we commence with barley water feeding on a two or three-hour basis, and if there is no carbohydrate intolerance, malt sugar is added. This can be continued for a day or so, then we, by the past history, determine the kind of food to be given. If we think we are dealing with a case

of fat intolerance or fat excess we start the child on skim milk formula. I use lactic acid milk sweetened with light karo corn sugar or syrup.

Dr. Marriott has shown that cow's milk has a greater buffer value, that is it takes more acid or alkali to change its reaction, therefore it takes a greater amount of acid, which we are supplying in the use of lactic acid, to change the chyme to acid reaction.

In some cases of fat intolerances, where skim milk is given but the child does not gain, you can follow Drs. Czerny and Kleinschmidt of Germany in the use of boiled butter flour mixture, which is claimed to be very excellent in results. This method of feeding is based on the theory that butter, when freed of its volatile acids by boiling, is assimilated in a higher percentage when combined with whole wheat flour. We can thus feed them higher percentage of fats and still not have any symptoms of fat disturbance. Where there are very mild symptoms of fat disturbance, a little lime water added to the milk will be sufficient to correct the trouble.

Of the carbohydrates, my experience favors malt sugars, and cane sugars when very much constipated.

The protein intolerance is probably the result of the child's inability to digest the heavy curds of milk. In these cases the initial purge is of most value.

Boiling milk for two or three minutes tends to make the curd more flocculent and in some cases will relieve the condition. Jacobi advocates the addition of cereals to the formula. This is claimed to attenuate the curd, and makes it more flocculent. When the simple addition of cereals and boiling does not correct the trouble, use peptogenic milk powder. Sodium citrate in doses of two or three grains to the ounce of the formula will prove a benefit in aiding digestion.

In cases where we are dealing with fat intolerance to which an intestinal infection has been added an initial dose of castor oil should be given, this to be followed by boiled water or sweetened tea with saccharine or some cereal waters, for about twenty-four hours. In my experience cases associated with marked infection in the intestinal canal plus systemic manifestations, are the most serious. There are a great many bacterial toxins in the intestinal canal and very often prove fatal, within a very few hours.

I often use bismuth and opii with alkalies by mouth, and irrigate the colon with starch water.

In malnutrition due to constitutional derangement, cod liver oil is the most valuable. Also fruit juices are very valuable in early life.

Exposure to the sun's rays, for several minutes each day, will do much to aid children in early life.

This by no means covers the subject of etiology and treatment, but I have emphasized the important points, and I hope it will serve a good purpose.

LICHEN PLANUS*

J. LEE KIRBY-SMITH, M.D.,
Jacksonville.

Lichen planus occurs with enough frequency in our practice to warrant a consideration. Crocker estimates that this disease constitutes about two per cent of skin cases seen in his practice. Generally considered, lichen planus is an interesting skin affection. Though its etiology is unknown, its clinical course and symptoms are comparatively regular. The diagnosis is fairly easy and treatment usually produces prompt and satisfactory results. Erasmus Wilson (a well-known English dermatologist) in 1869 was the first to clearly describe lichen planus. Since then a number of observers have added information to the subject.

Lichen planus is an inflammatory itchy skin disease of unknown origin characterized by the formation of pin-head to small pea-sized flattened, glistening, crimson or violaceous papules, with often a slight central depression and often an irregular or angular base tending to coalescence and the formation of areas with roughened or scaly surfaces. At times the eruption is general but more often it is only seen in certain localities. The favorite sites are about the flexor aspects of the wrists and forearms and the lower part of the leg.

The disease generally begins insiduously. The lesions are at first discrete, scattered, bright or dark red in appearance, slightly elevated with a flattened shiny or glistening top, in the central part of which there is usually a minute depression. The base of the lesion is usually irregularly quadrangular. At times the eruptive lesions

are arranged in an annular formation (lichen planus anularis). Occasionally the eruption follows the cleavage of the skin. This condition is spoken of as lichenification. Then, too, there is a linear formation, lesions following closely scratch marks. This type of lichen planus is spoken of as lichen planus linearis.

After the eruption develops there is a tendency to group formation. Especially is this true of the location of patches on extremities which at times assumes a verrucose appearance. Lichen planus of this type is called hypertrophic lichen planus. The course of the disease is in most cases slow, insidious and chronic and in many of the limited cases after reaching a certain point of development it may remain stationary for a long time. Exceptionally the eruption disappears spontaneously, but as a rule it is persistent. It is rare that there are general constitutional symptoms other than a nervous element resulting from the itching symptoms of the disease. The lesions of lichen planus occur quite frequently in the mouth and the mucous membranes of the vagina; also on the penis.

ETIOLOGY.

Lichen planus is not a frequent disease. It is seen in both sexes but in my experience is more often seen in women of a middle aged, nervous type. It is most frequently observed in those patients of a neurotic type; oftentimes in those who have prolonged overwork or worry. No information as to the cause of lichen planus has been found to date through the study of the blood, either from blood chemistry or serological study. The Wassermann test is uniformly in the negative. No bacterial or vegetable parasites have been recovered from individual lesions.

DIAGNOSIS.

The diagnosis of lichen planus is comparatively easy when one considers the characteristics of individual lesions; the flat-topped, shiny, violaceous papules occurring on the flexor surfaces particularly, marked itching, and the tendency to form thickened patches, with scaliness and roughness. Psoriasis is differentiated from lichen planus by the location of the patches on the extensor surfaces, loose scale formation, lack of itching. Then, too, the color of psoriatic lesions is not to be compared with the violaceous or purplish hue of lichen planus. The acute disseminated lichen planus eruption should not

*Read before the Riverside Hospital Staff Meeting, February, 1927.

be confused with a general papular eczema. The lesions of the latter being sharp pointed (acuminate), usually excoriated from scratching, and generally there is present a gummy, oozing characteristic.

PROGNOSIS.

The natural course of the disease is persistent and oftentimes progressive and shows little tendency to spontaneous recovery. With treatment lichen planus can be cured, sometimes within a few months, but often a much longer time is required. There is often a tendency to recurrence. As the lesions involute under treatment pigmentation of the skin is the result. This discoloration usually disappears slowly, though in hypertrophic lesions on the extremities the pigmentation persists permanently.

TREATMENT.

The treatment of lichen planus is both local and systemic. Before the introduction of the X-ray for the treatment of skin disease and the use of intravenous and intramuscular therapy, the cure of lichen planus was very slow. In the years gone by keratolytic ointments were used with success, but were very slow in their action. Internally reliance was had on arsenic in the form of Fowler's solution or the Asiatic pill along with the old-fashioned formula of "mixed treatment." Generally considered the internal treatment of lichen planus was along the lines of that for syphilis. Both arsenic and mercury, separately or combined, were considered a specific for lichen planus. Both of these drugs were given to the point of tolerance. At the present time the systemic treatment of lichen planus is by the hypodermic needle route. For arsenic the cacodylate of soda preparation is the most useful and easily administered, usually given intravenously through a course of several weeks' treatment. For mercury the writer prefers the salicylate, this being given alternately (intramuscularly) with the cacodylate. Locally soothing lotions or ointments are indicated to control the itching until the eruptive symptoms begin to subside. With the use of the X-ray, one-fourth of a skin dose being administered at weekly intervals, there is a prompt and decided improvement, not only in the character of the lesions but in the subjective symptoms. This will be markedly noted after one or two treatments. In the case of a generalized lichen planus the X-ray treatments necessarily have to be divided as it

is quite a problem to cover so much skin with the treatments. As mentioned, itching is promptly relieved and with soothing lotions and constitutional treatment, the patient soon becomes comfortable. In all about six weeks are necessary to show pigmentation in disappearing lesions. Occasionally the lichen planus proves more stubborn to treatment. New lesions will persist in appearing and some of the patches on the lower extremities may become hypertrophic and after all the other symptoms have disappeared these lesions will require additional treatment. Generally speaking, with modern treatment we can expect to cure the average case of lichen planus in six to ten weeks.

A CASE OF TULAREMIA

N. A. BALTZELL, M.D.,
Marianna.

In the medical literature from a few sections of the country one finds reported cases of tularemia, which suggests that this disease is not confined to any one section, but to those particular regions wherein wild rabbits abound.

The following is a rather typical case, with one or two exceptions, which I shall call attention to in case history:

W. B., colored boy, aged 16. Inmate of Florida Industrial School for Boys at Marianna, Florida. Admitted to school March 7, 1927; general physical condition, good. On March 14, while out in one of the fields of the school, a rabbit was killed, and, with a common jack-knife, patient assisted in dressing and skinning rabbit.

He felt as usual, with no complaint of pain or evidence of any abnormality or pathologic condition until afternoon of March 24, when he complained of pain in throat and severe headache. Upon admission to hospital on above date, his temperature was 104 F., respiration 26, and pulse 110; with marked prostration. On March 25, patient complained of considerable dyspnea, with continuous headache. Examination showed throat negative, both eyes were markedly swollen, and an extreme enlargement of submaxillary glands, particularly on left side. In 24 hours, epitrochlear, inguinal (particularly on left side); axillary and cervical glands on both sides were moderately swollen. There were

marked encaphalic symptoms for the first 96 hours; patient still complaining of severe headache when aroused; but extremely drowsy and somnolent; it being necessary to awaken him for medicine and nourishment.

Urine examined on fourth day showed nothing abnormal.

The temperature range during entire course of disease was remarkable; in that, hyperpyrexia was associated daily with subnormal temperature; a range of 8 degrees F. not being unusual during the first five days, for frequently 96 1/5 degrees to 104 was recorded. An extensive blephora-conjunctivitis of both eyes persisting throughout entire course of disease was another remarkable feature. Glands gradually diminishing at this date, April 15, with no signs of supuration. The primary source of infection was undoubtedly an abrasion on flexor surface of right forearm just below elbow.

That this case was one of profound toxemia is evidenced by the symptoms, and is further shown from the report of the hygienic laboratory of United States Public Health Service, Washington, D. C., that patient's serum was found to agglutinate bacterium tularensis in dilution all the way from 1-10 to 1-320.

THE STUDY OF THE RESPIRATORY CAVITIES WITH LIPIODOL*

WILLIAM JEROME KNAUER, M.D.,
Jacksonville.

The advances made in the field of bronchoscopy in the past few years have reached such an important phase that it is now almost becoming a specialty within itself. One of the greatest steps in the past several years has been the visualizing of the bronchial tree by means of opaque material injected into these cavities. The purpose of this paper tonight is to bring your attention to the vast possibilities of lung study with the injection through the bronchoscope of an iodized oil—namely lipiodol.

In 1921, Jaques Forrestier, working in the department of Professor Secard in Paris, began the use of iodized oil (lipiodol) as an opaque medium for X-ray diagnosis. In 1922, the first pictures were published, and since that time this method has become widely extended, several

important papers having been published in this country in the past year.

The injection of lipiodol is usually made through the bronchoscope, although it can be done through the laryngoscope, injected through the crico-thyroid membrane or by slowly dropping the oil at the base of the tongue.

I prefer the injection through the bronchoscope for the following reasons:

First, that it places the iodized oil exactly where it is intended to be put. Second, it allows you to thoroughly aspirate pus and secretions from the lung cavities before introducing the iodized oil, thus giving you a clearer and better picture. Third, there are many cases in which the entrance to an abscess cavity may be blocked by a stenosed bronchus or by granulations. Here one by the bronchoscopic method can dilate the stenosed bronchus or remove granulation tissue, and then inject lipiodol. By any other method, diagnosis in such cases might be missed. Fourth, by the bronchoscopic method, one can thoroughly inspect and see the region of the lung involved, thus a better diagnosis can be given and a more thorough knowledge of the pathology involved gained. Fifth, by the bronchoscopic method, a positive pneumogram is obtained with a minimum quantity of opaque oil.

The technic is as follows:

The patient is allowed no food for four hours previous to the bronchoscopy. One hour before operation the patient is given morphine sulphate, one-fourth grain, and atrophine sulphate 1/150 grain, hypodermatically. The larynx is thoroughly anesthetized with five per cocaine, and the bronchoscope introduced according to the Jackson technic. All secretions are then aspirated and the patient is turned on the side to be examined, and the oil is injected through a tube which is introduced through the bronchoscope. A flexible tube is preferred. After the removal of the tube and bronchoscope, the patient is kept in the same position as during the bronchoscopy. It is very important that the patient be told to try to avoid coughing. The roentgenograms should be made immediately to obtain the best results, and the injection should be made on the roentgenologist's table, where it is possible. About twenty to forty c.c. of lipiodol can be injected at a time. The lung can be studied at intervals of from two to eight weeks after injection.

*Read before Staff meeting at St. Vincent's Hospital, Jacksonville, September 13, 1926.

Lipiodol is a chemical combination in which forty per cent of iodine is very strongly bound to a vegetable oil, namely, poppy seed oil. It is a mild antiseptic and liberates slowly but continuously iodine.

The injection of lipiodol is, of course, contraindicated in hemorrhage, active tuberculosis and in acute septic conditions when the condition of the patient is very bad. Idiosyncrasy to iodine is not a contraindication in most cases, unless it is pronounced.

It is obvious that a good film of the lungs should be obtained before the injections, to give information about the segments to be explored and afford fruitful comparison of films before and after injection. It is also obvious that films should be taken as soon after injection as possible.

Lipiodol is especially useful in confused cases, where neither the clinical diagnosis nor the X-ray examinations can lead to a positive opinion.

It is especially helpful in the study of the normal anatomy and physiology of the bronchial tree, in the outlining of deviations of the trachea

and bronchi, in the location of foreign bodies, in better visualizing bronchiectatic cavities and lung abscesses, in chest surgery and in the location of tumors in the lung.

As to the therapeutic value, there seems to be some action in cases of chronic lung suppuration. There is usually a diminution of the sputum and suppression of the foul odor.

CONCLUSIONS

1. That the advances made in the field of bronchoscopy in the past few years have reached an important phase.
2. That the injection of lipiodol into the respiratory cavities offers many new possibilities of lung study, especially in confused cases.
3. That the bronchoscopic method is the best one.
4. That the patient should be X-rayed immediately after the injection, if possible.
5. That a good film of the lungs should be obtained before the injection to give information about the segments to be explored, and afford fruitful comparison of films before and after injection.



CHRONIC BRONCHIECTASIS OF THE BASE OF BOTH LUNGS AS SHOWN WITH THE INJECTION OF LIPIODOL.

(Courtesy of Drs. Cunningham and Shaw)

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TYPHOID FEVER

Because during the first five months of this year there were in this state eighteen fewer deaths from this disease than during the same period of last year is no reason for letting up on the campaign against typhoid, but it is a strong argument for an even more strenuous one because we can see the results.

There are a few points to be considered in any effort to cut down the incidence of typhoid.

1st. Typhoid is contracted only when we take into our mouths some of the discharges of a typhoid patient or carrier.

2nd. Bearing this in mind, we should eat and drink only in such places as are protected.

3rd. Only an overwhelming amount of the infection will give the disease to one who has been recently protected by anti-typhoid vaccination.

4th. Fingers, pencils, etc., should not be put in the mouth.

Government figures show that throughout the country there is a considerable amount of typhoid and people from those states with a relatively high incidence of the disease are coming here; they are also coming through states where typhoid exists and some will become infected on the journey developing the disease after their arrival.

The fight against typhoid must be continued from all angles, safe disposal of human excreta, disinfection of the discharges of typhoid patients and the immunization of not only known contacts but of every possible individual.

The municipal water supplies are safe and those who are traveling should either carry water with them or wait until they reach a safe supply before they drink, for it pays to take no chances.

ANTITOXIN FOR SNAKE BITES

For some time it has been possible to obtain an antitoxin for use following snake bites in South and Central America, but only very recently has this been obtainable in this country.

The Antivenin Institute of America, a division of the Mulford Biological Laboratories, has introduced this product which is produced in the same manner as diphtheria and tetanus antitoxin, the immunization being effective against copperheads, moccasins and rattlesnakes.

A series of fifteen cases was given in the Mulford Multigram, the oldest date being May 7, 1927, and including two bitten by copperheads, one probably a moccasin, and twelve by rattlers but with one failure and in this case the serum was not administered until six hours after the bite and "the child's condition was very serious at this time."

One of the above series was a Florida case (Dr. H. P. Bevis, Arcadia) and the daily papers of Jacksonville have carried notice of another case occurring in Duval County.

It would be of service to the entire profession if any cases occurring in the state would be reported to the State Board of Health, giving data as to the severity of the bites, the location of bites, first aid treatment given, length of time before serum was administered and results together with any observations of interest. Descriptive circulars can be obtained by applying to the State Board of Health, Jacksonville.

STATE NEWS ITEMS

Dr. George R. Creekmore of Brooksville has been attending clinics at Atlanta, Georgia.

* * *

Dr. J. H. Bickerstaff of Pensacola is in Vienna, Austria, for post-graduate work, having sailed from New York on the 26th of June. He expects to return the latter part of October.

* * *

Dr. E. J. Melville of St. Petersburg is enjoying a vacation in his summer home at Red Lodge near St. Albans, Vermont. During his absence he will also visit the clinics of New York and Montreal. Dr. Melville expects to return to St. Petersburg to resume his practice about October 1st.

* * *

Dr. L. W. Martin of Punta Gorda has just returned from a trip to Washington, D. C., and Chicago. While at Washington he attended the meeting of the American Medical Association and later journeyed to Chicago for special post-graduate work.

* * *

Dr. W. C. Williams, Jr., of Delray, left recently for Rochester, Minnesota, to take up post-graduate work in the Mayo clinic. Dr. Williams expects to return about September 1st.

* * *

Mr. William D. Jones, druggist, who for many years has conducted his pharmacy at the corner of Main and Bay streets, Jacksonville, has moved his business to the corner of Laura and Adams streets in the new Greenleaf & Crosby building.

* * *

At a recent meeting of the Medical Alumni Association of Emory University, held in Atlanta, Dr. J. C. Davis of Quincy was elected first vice-president and Dr. T. J. Jackson of Dade City, second vice-president.

* * *

Mrs. L. M. Anderson, wife of Dr. L. M. Anderson of Lake City, is spending the summer in the mountains of North Carolina.

* * *

The \$250,000 hospital being erected by Alachua county in Gainesville is rapidly nearing completion.

* * *

The Jackson County Medical Society met at the Chipola Hotel, Marianna, on July 12th. A paper was read by Dr. C. H. Ryals.

Dr. and Mrs. Harry F. Watt of Ocala are now touring the New England states and later expect to visit Canada.

* * *

Dr. G. R. Mauzer has recently moved from Zephyrhills to Tampa.

* * *

The new Medical Arts Building being erected at Seventh Avenue and Eleventh Street, north, St. Petersburg, is rapidly nearing completion and will open about October 1st.

* * *

Dr. George E. W. Hardy, Jr., major, M. C., Florida National Guard, of Tampa, is attending the encampment of the 116th Field Artillery in Columbia, South Carolina. Dr. Hardy is serving as regimental surgeon. Following the encampment, he expects to travel to Baltimore and spend some time at Johns Hopkins. He expects to return to Tampa about October 20th.

* * *

Dr. Chas. D. Cleghorn of Miami has gone to New York for a month's post-graduate work.

* * *

Dr. E. T. Lake, major, M. C., of Tampa, has been ordered to Fort Bragg, near Fayetteville, North Carolina, for two weeks' duty with the 397th Field Artillery.

* * *

Dr. F. P. Herman of West Palm Beach has been appointed to the Board of Medical Examiners. Endorsement of his appointment has been given by the medical societies of Palm Beach, Dade and Broward counties.

* * *

Dr. J. N. Fogarty of St. Augustine has recently moved to Daytona Beach, where he will continue his practice of medicine and surgery. Dr. Fogarty recently resigned as chief surgeon of the Florida East Coast Railway Company.

* * *

At a recent meeting of the Broward County Medical Society, Dr. B. F. Butler of Hollywood and Dr. R. H. Stovall of Ft. Lauderdale read papers.

* * *

The DeSoto county commissioners recently purchased forty acres of land lying southeast of Arcadia as a site for a county hospital. It is expected that the county will expend approximately \$300,000 in the erection and equipping of the hospital.

Dr. J. M. Davis, secretary of the Manatee County Medical Society, Bradenton, is doing post-graduate work in New York.

* * *

Dr. I. W. Chandler of Avon Park, secretary of the DeSoto-Hardee-Highlands County Medical Society, is spending his vacation in north Georgia.

* * *

A number of physicians of Putnam county met recently and tentatively organized the Putnam County Medical Society. Dr. E. W. Warren of Palatka was elected secretary until a permanent organization can be perfected.

* * *

The Tri-county medical society, composed of doctors from Walton, Okaloosa and Santa Rosa counties, recently met at Crestview and had the following Pensacola doctors as guests: H. L. Bryans, C. W. D'Alemberte, J. M. Hoffman, C. J. Heinberg, J. H. Lischkoff and W. C. Payne.

* * *

ESCAMBIA COUNTY MEDICAL SOCIETY REACHES TOP. ESCAMBIA COUNTY SOCIETY BECOMES THE EIGHTEENTH SOCIETY TO REPORT 100% OF ITS MEMBERS IN GOOD STANDING, AND IS TO BE CONGRATULATED ON ITS ACHIEVEMENT. IT IS TO BE HOPED THAT THE SIXTEEN SOCIETIES NOT ON THE HONOR ROLL WILL PUT FORTH STRENUOUS EFFORT TO COLLECT CURRENT DUES THAT OUR AIM OF A 100% PAID STATE MEMBERSHIP MAY BE REALIZED.

* * *

Dr. T. H. Johnston, Field Medical Officer, State Board of Health, with headquarters at Marianna, has tendered his resignation which became effective July 11th. He has accepted a position as Health Officer for Coffee County, Georgia. Mrs. (Victoria) Johnston, M.D., University of Manitoba, 1927, joined him at Marianna and accompanied him to the new location in Douglas, Georgia.

* * *

Dr. J. G. DuPuis, of Lemon City, one of the oldest practicing physicians in Dade county, in point of service, and owner and operator of the White Belt Dairy in N. W. Thirty-fifth avenue, Miami, recently entertained more than one hundred members of the Dade County Medical So-



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THEORY and practice both agree upon the many advantages of human milk in infant feeding whenever it is possible to keep the baby on the breast.

Theory and practice meet again, on common ground, in the acceptance of cow's milk modifications, principally dilutions and additions, with water the diluent and carbohydrate the chief reconstituent.

Theory has long maintained that the next step in the evolution of modern infant feeding would result in something more than a mere cow's milk modification. It has affirmed that an approximation of breast milk could not be secured without a process of complete cow's milk reconstruction.

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cietly in the hall of the main building of the dairy-farm plant.

Those attending were shown through the plant and told of the manner in which the dairy has become, as one speaker at the dinner which followed the inspection tour put it, "the finest institution of its kind in the South." The evening was concluded by an inspection of and demonstration in the bacteriological testing laboratory, the largest in Florida and one of the few of its type in this country, operated by a private enterprise.

The dinner tendered by Dr. DuPuis consisted, practically without exception, of products raised somewhere within the 1,000 acres comprising the White Belt dairy, farm and employes' colony. The meal was served and entertainment provided during its progress by members of the staff of the dairy and farm.

A motion picture showing the prize cattle at the farm and the highly modern manner in which the milk is produced, kept clean and pure, and delivered as milk which is classed as on a par with the highest grade milk produced in this country, was thrown on a screen in the dairy hall after the dinner.

Dr. R. C. Woodard, president of the medical society, presided over a business meeting of the organization conducted during the evening. The names of Dr. John C. Turner of Miami and Dr. F. E. Herman of West Palm Beach were submitted and endorsed for recommendation to Governor Martin as appointees to vacancies on the state medical examining board.

Much interest was manifest in the report of Dr. Urcil Meyers, bacteriologist in charge of the White Belt laboratory, regarding his experiments with the effects of various kinds of milk upon young rats. Three rats weighing 50 grams, he said, were fed for a period of 36 days on pasteurized milk, specially prepared raw milk, and milk which had been brought to the boiling point, respectively. At the end of the 36 days, he declared, the boiled milk rat died, weighing 84 grams; the pasteurized milk rat weighed 97 grams, and the raw milk rat weighed 134 grams.

Tribute to Dr. DuPuis for his vision and energy in building the dairy from an establishment boasting only one cow to one of the largest and best equipped plants in the country was paid by older members of the society.

Dr. W. A. Claxton, chief of the city health division, also praised the work and products of Dr. DuPuis and his dairy.

* * *

Any physician who may be interested in the Florida Farm Colony for the epileptic and feeble minded, at Gainesville, a state hospital for the care and training of epileptic and feeble minded children, may secure a copy of the Fourth Biennial Report of the institution by addressing a request for the same to Dr. J. H. Hodges, who is in charge of the Colony. The present capacity is 400. Only white children are admitted.

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Dr. H. A. Barge, 405 Calumet building, Miami, spent the months of June and July at the Mayo Clinic, Rochester, Minnesota.

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Dr. R. A. Ely of Tampa attended the recent meeting of the American Medical Association held at Washington, D. C.

* * *

At the regular meeting of the Lake County Medical Society held July 1st, Dr. C. D. Christ of Orlando, representing the Gorgas Memorial Institute, placed before the society a plan for educating the reading public to appreciate the value of health conservation by regular medical examinations and advice by doctors of medicine. The plan was accepted by the society as presented and a committee appointed to attend to its execution. Dr. W. Lee Ashton of Eustis was named by President McKee to provide a special article for reading at the next regular meeting at Tavares, August 4th.

* * *

Dr. James T. Cowart of the Children's Hospital, Tampa, has returned from a visit to Atlanta, Macon and New York City.

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These facts being true, our subscribers should, other things being equal, give preference to the firms, goods, and institutions advertised in these pages. All our advertisers are in the A1 class. They want your patronage and it should be a duty, as well as a privilege, to buy from them. The lumberman who bought a "gold" brick prided himself on the fact that he never read newspapers. Read the advertisements in the Journal. **DON'T BUY "GOLD" BRICKS.**

Dr. W. C. McConnell of St. Petersburg has been appointed medical examiner for the aeronautics branch of the Department of Commerce and Health Officer for the town of Pinellas Park.

* * *

The city of Jacksonville and Duval County expect to compete with Orange County during the next year for the enviable position of first place for the lowest rate of time lost out of the schools for sickness.

* * *

Dr. and Mrs. B. F. Woolsey of Jacksonville recently returned from New York City where Dr. Woolsey did six weeks' post-graduate work at the New York Post-Graduate and Bellevue Hospitals.

* * *

Dr. N. M. Marr of St. Petersburg, while away on a vacation, was operated on for appendicitis at Parkersburg, West Virginia.

* * *

The hospital built by the city of Bartow was recently completed and equipment is being purchased. It is expected that it will be ready for patients during the coming fall.

* * *

Dr. and Mrs. Horace Williams of Tampa, accompanied by Misses Virginia and Recarda Williams, have been visiting Dr. Williams' sister in Jacksonville.

* * *

Dr. W. C. Thomas of Gainesville spent the month of July in the clinics of Baltimore and Boston.

* * *

Dr. S. P. Brush of Ft. Lauderdale recently purchased the Lauderdale Memorial Hospital and expects to devote his entire time to its administration. A complete staff, with officers, was elected at a recent meeting held at the hospital to serve for the ensuing year and a constitution and by-laws adopted to govern the activities of the staff. Dr. C. J. Wiig was chosen president of the staff; Dr. H. J. Peavy, secretary, and Drs. L. F. Robinson, L. H. Maxwell and H. A. Walker of Hollywood, will serve as an executive committee, together with the president of the staff and Dr. S. P. Brush, superintendent of the hospital. A condition imposed in the by-laws makes it necessary that all members of the staff be members of the Broward County Medical Society. The meeting voted to include Drs.

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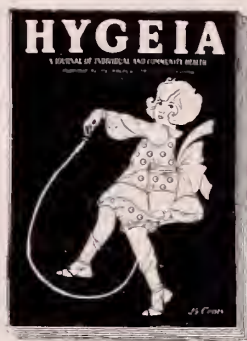
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L. E. Roper, J. M. Hartley and E. McLowrie of Hollywood, who were not present, in the hospital staff. The following divisions were made for the various services: Surgery, Drs. Robinson, Walker, Wügg, R. M. Klussman and R. Lingenman; medical and obstetrical, Drs. L. H. Maxwell, F. S. Skiff, Peavy, Roper, Hartley, W. T. Van Dament, J. A. Johnston, B. F. Butler, R. S. Lowry, J. A. Stamford; urology, Mrs. D. E. Carter, Dr. H. A. Klussman; pediatrics, Drs. R. H. Stovall, Elbert McLowry; eye, ear, nose and throat, Drs. R. E. Repess and O. C. Brown; X-ray, Dr. E. M. Hendrick.

* * *

Miss Cornelia Dozier, daughter of Dr. and Mrs. Harry C. Dozier, was married to Mr. Norris Baskins, Wednesday, July 27th, at Ocala.

* * *

Dr. F. C. Moor of Tallahassee has recently returned from Harvard University where he spent several weeks taking special work.

* * *

Dr. Raymond Sanderson of Jacksonville has recently been authorized to make examinations of pilots and candidates for the aviation corps.

* * *

Dr. and Mrs. W. Clayton Page of Cocoa are spending their vacation in the Blue Ridge mountains of North Carolina. While away, Dr. Page expects to attend the Southern Pediatric Seminar held at Saluda, North Carolina.

* * *

Dr. T. S. Adams of Jacksonville was recently elected president of the reorganized United States Board of Medical Examiners. Dr. Charles B. Mabry was made treasurer, Dr. Albert Wilkinson, secretary, and Dr. C. R. Wilcox, alternate.

* * *

Dr. Wm. C. Smith Hughlett and Miss Violet Packard of Cocoa were recently married.

* * *

Dr. Luther Holloway has returned to Jacksonville from a visit to Tallahassee.

* * *

Resolutions expressing deep regret at the passing of Dr. R. L. Harris of Jacksonville have recently been adopted by the Orange County Medical Society. Dr. Harris formerly resided in Orlando.

The resolutions follow:

"In the death of Dr. R. L. Harris, of Jackson-



Brawner's Sanitarium

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A modern neuropsychiatric hospital with special laboratory facilities for the study and treatment of early cases. Also a department for the treatment of drug and alcoholic addictions.

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The transformer and rectifying unit can be installed in an isolated place, and is adaptable to almost any laboratory condition.

Control cabinet is of metal, with removable panels. The shock hazard has been practically eliminated in the unique construction of the switch-board. "Live" parts are beneath the grounded metal base and actuated by bakelite handles.

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THE NEW FENWICK SANITARIUM, COVINGTON, LOUISIANA

ville, the state has lost one of the old guard of pioneer physicians.

"Dr. Harris located in Florida some forty years ago, first at Oakland and later in Orlando, Orange county, where he practiced medicine for some twenty years.

"Dr. Harris was a courageous physician, charitable to the needy and an untiring worker. He was the first man to bring improved surgery to Florida, going to the larger medical centers and getting the best information and equipment to be obtained at the time and bringing this service to the people of central Florida.

"He built and operated the Harris sanitarium on North Orange avenue and later built and operated a tubercular sanitarium at Formosa. The latter institution was purchased by the Florida Seventh Day Adventists and made into a general hospital and rest cure institution, and is now one of the best equipped health resorts in the state of Florida.

"About nineteen years ago Dr. Harris moved to Jacksonville, and due to defective vision gave up his work of general surgery and established a modern, up-to-date X-ray laboratory. This work he followed up to the date of his death.

"Respectfully submitted,

"C. D. CHRIST, M.D.

"SYLVAN McELROY, M.D."

* * *

The Suwannee River Medical Society met July 7 in the Suwannee Hotel in Live Oak.

After an excellent chicken dinner the meeting was opened by the vice-president of the Society, Dr. T. S. Anderson of Live Oak. The scientific paper of the evening was presented by Dr. W. M. Ives, of Lake City, whose subject was "Pyelitis in Children." Dr. Ives' discussion of this rather grave kidney disease brought out many interesting points, many of which are among the latest in medical development. Discussion of the paper was opened by Drs. R. B. Harkness and L. M. Anderson, Lake City. Dr. Harkness reported an interesting accident case.

The society voted to postpone other meetings until October.

Among those present were: Drs. L. M. Anderson, T. H. Bates, R. B. Harkness, J. A. Black and W. M. Ives, of Lake City; J. M. Price, W. C. White, T. S. Anderson, H. M. Strickland and H. F. Airth, of Live Oak.

The next meeting will be in Lake City the second Friday of October.


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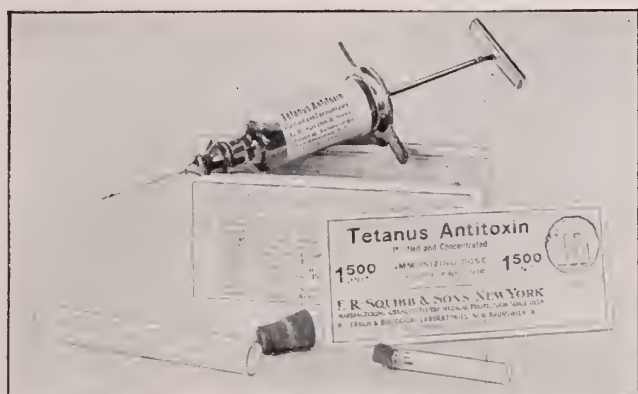
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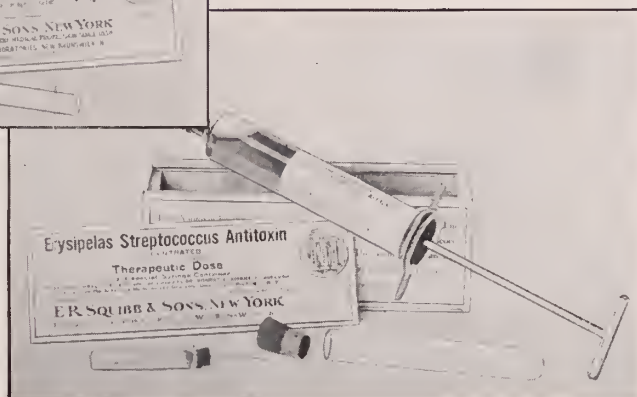
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ORGANIZATION OF THE FLORIDA EAST COAST MEDICAL ASSO- CIATION

On Friday, July 1, 1927, delegations of physicians from Broward and Palm Beach Counties met with the Dade County Medical Society, for the purpose of forming a medical association to be composed of physicians along the East Coast.

The idea of such organization was: The promotion of scientific medicine, the encouragement of the presentation of medical papers, the strengthening of organized medicine, and the establishment of more friendly relations between the physicians of the East Coast Counties, by means of fuller acquaintanceship.

Dr. John A. Simmons, president of the Florida State Medical Association, stated the object of the meeting and introduced the visiting members from the other counties to the society.

Dr. W. E. Van Landingham, of West Palm Beach, first vice-president of the state association, was elected temporary chairman; Dr. Henry C. Babcock, of Miami, first vice-president; Dr. Leigh F. Robinson, of Fort Lauderdale, second vice-president, and Dr. Roy Holmes, of Miami, secretary-treasurer.

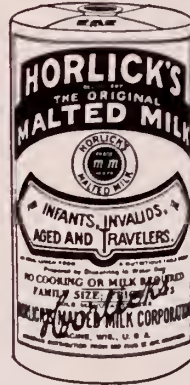
A committee composed of the following physicians was appointed to draw up the By-Laws and Constitution of the Association, viz: Drs. Gerard Raap, of Miami, H. A. Walker, of Hollywood, and John E. Hall, of West Palm Beach.

Dr. Simmons stated that it was proposed to have the meetings of the Association twice yearly, at points to be selected from time to time, and that in all probability these meetings would be held during the months of April and November of each year. He was particularly desirous of having the active cooperation of the physicians from the smaller towns, and instructed the secretary to issue personal invitations to each and every physician in all towns from Key West to Daytona, to help make these meetings a great success, by attending and reading papers before the Association.

Drs. Woodard, Flipse, Raap, Robinson, Walker, Van Landingham, Herman and many others made enthusiastic talks, favoring this organization.

Dr. Roy Holmes, the temporary secretary, is a "live-wire," and as stated by Dr. Simmons, it is necessary to have such a man as secretary if one desires to see enthusiasm displayed at the meetings.

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The personnel of the officers being what it is, it is freely predicted that this Association will not be surpassed by any other in the state, and it is believed the attendance will be represented by physicians from the entire length of the East Coast.

J. O. STRANAHAN

Dr. J. O. Stranahan, Ft. Lauderdale, died July 9, 1927, following a series of surgical operations, at Richmond, Va. He is survived by the widow and two daughters. Dr. Stranahan was born in Oswego County, N. Y., in 1872. He was graduated from the medical college of Syracuse in 1896. For three years he was a physician in the State Hospital Service of New York at Central Island, L. I., and Poughkeepsie, N. Y. He located in Rome, N. Y., in 1900 and practiced there for 25 years, during which time he was active in social and civic problems, serving as president of the Board of Health, president of the Board of Education, member of the Board of Trustees of the First M. E. Church. He was part owner and chief of the medical staff of the Rome Infirmary.

Dr. Stranahan came to Ft. Lauderdale in 1924, to make his home. Here he continued his active interests in professional and civic affairs. He was a charter member of the Broward County Medical Society and its vice-president for the past year, and a member of the staff of the Lauderdale Memorial Hospital. He was a member of the Anglers' Club, Masonic Lodge and Mahi Shrine Temple of Miami.

In 1897 he was married to Gladys Hibbard. Three children came to this union, Marion, Marjorie and Donald.

LEIGH F. ROBINSON.

Dr. B. F. Woolsey and Miss Helen Beck, both of Jacksonville, were married March 24th at the Methodist Episcopal Church of Gainesville.

* * *

Dr. F. S. O'Hara, formerly of West Palm Beach, at the earnest request of his physician friends, has reopened his X-ray laboratories in Springfield, Illinois.

* * *

Dr. A. F. Thomas of Titusville is moving to Sanford where he will be associated with Dr. C. J. Marshall in the Neisch building.

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Dr. and Mrs. S. A. Morris who left Jacksonville early in June for a trip around the world are now in Honolulu. From there, they expect to sail for Japan. They will return to Jacksonville in January.

* * *

At a recent meeting of the DeSoto-Hardee-Highlands County Medical Society held in Arcadia, Dr. Hiram Byrd read a paper on "Asthma."

* * *

Mrs. I. A. Black, wife of Dr. I. A. Black of Lake City, and daughter, Elizabeth, are spending the summer at Kelly Springs, Alabama.

* * *

The Columbia County Medical Society has discontinued monthly meetings until the second Monday evening in September.

* * *

Drs. Ralph N. Green and Ernest B. Milam, of Jacksonville, addressed a large assemblage at the meeting of the Palm Beach Academy of Medicine, at West Palm Beach, on the evening of July 27.

The meeting was held at the Monterey Hotel, and was attended by a large delegation of physicians from Miami.

Dr. John A. Simmons, president of the Florida Medical Association, made a talk in behalf of the newly organized Florida East Coast Medical Association. This Association is to be composed of all reputable physicians, in good standing with their local societies, from Melbourne to Key West, and is to meet twice annually, in November and April, of each year.

Some of the other Miami physicians speaking in favor of the Association were: Dr. R. C. Woodard and Dr. Gerard Raap, president and secretary, respectively, of the Dade County Medical Society, as well as Drs. Babcock, Stuart, Snyder, Holmes, E. J. Hall, F. A. Gowdy, R. A. Gowdy, M. J. Flipse, and others.

Dr. W. E. Van Landingham, of West Palm Beach, is the president; Dr. Henry C. Babcock, of Miami, first vice-president, and Dr. Leigh F. Robinson, of Fort Lauderdale, the second vice-president, while Dr. Roy J. Holmes, of Miami, is the secretary-treasurer.

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THE JOURNAL

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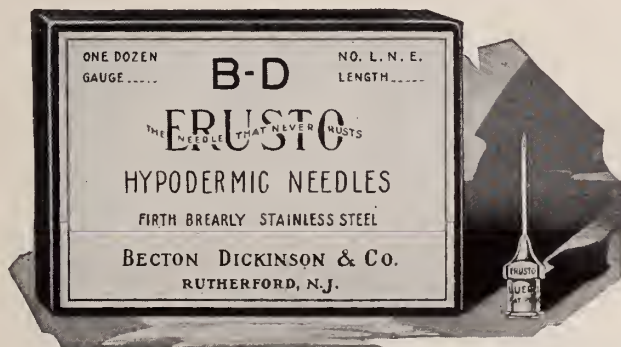
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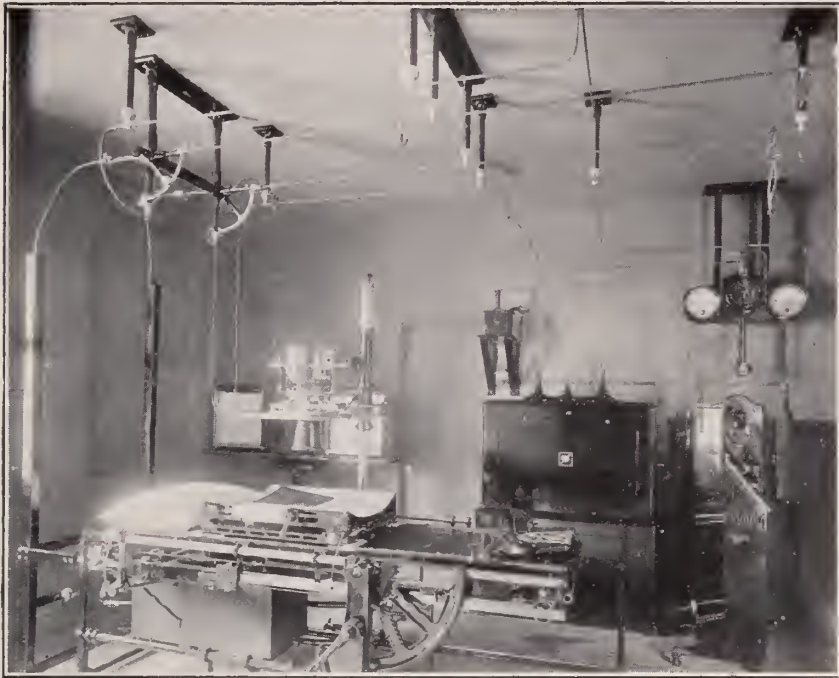
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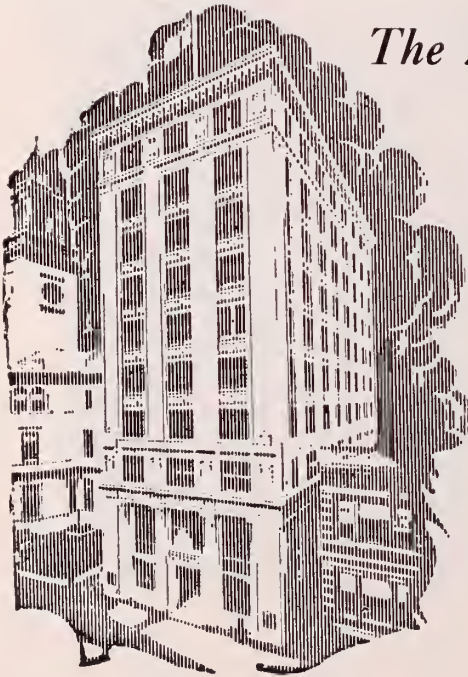
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URETERAL STRICTURE AS AN ETIOLOGICAL FACTOR IN KIDNEY DISEASE*

CAYETANO PANETTIERE, M.D.,
Miami Beach.

For the past decade the question of ureteral stricture has been the object of a very animated and aggressive controversy, and only very recently, the condition gained general acceptance as a distinct disease entity. Without being carried away by the optimism that naturally looms up in enthusiasts, I have been trying to follow out the progress of these patients from a disinterested standpoint, and more especially because in the practice of gynecology I know of no other condition which is more apt to give rise to confusion in interpretation of symptoms and serious mistakes in diagnosis.

It is beyond the scope of this paper to present the complete picture of ureteral stricture, or to enter into a discussion of the basic factors underlying the relationship between strictures of the ureter and its allied disorders, but rather to bring before you the important pathological conditions associated with ureteral strictures, and what is more striking, the fact that treatment of these strictures favoring adequate kidney drainage is accompanied by the disappearance of symptoms and by pronounced improvement in renal function.

Definition.—Ureteral stricture is the term applied to the narrowing of the lumen of the ureter. This may be simple or multiple, and may be (1) the result of an intrinsic inflammatory condition of the ureteral wall, or (2) the result of trauma either from operation or radiation, or (3) due to developmental malformations of foetal life.

Etiology.—Except for the better and clearly defined cases of stricture following trauma, either from operation or by radiation, or for those cases resulting from embryological imperfections of the ureter, either in the form of valve formation or true stricture, the majority are doubtless attributable to focal infection. One is

impressed with (1) the history of an attack of tonsilitis, sinusitis, influenza or an alveolar abscess antedating the onset of ureteral symptoms, (2) with patients who have remained well for some time after receiving treatment for their strictures, but who having contracted some infection (usually respiratory in character) in the interim, return with the reappearance of ureteral stricture symptoms, (3) the fact that in obstinate cases, ureteral treatment is futile unless all foci of infection have been cleared up. *Age:* Age does not seem to be a factor as the old and young are affected equally; the largest incidence, however, was noted between the ages of twenty and forty-five years. *Sex:* While the nature of our work naturally throws the bulk of our observations on female patients, male urologists are continually reporting larger incidence among males than was formerly the case.

Symptoms.—The outstanding symptom is pain, referable to the pelvic region. Women often speak of this pain as due to the womb or ovaries, owing to its increased severity during the premenstrual and menstrual periods. Backache and bladder disturbances, more especially dysuria and polakiuria, constitute the other pronounced symptoms. The peculiar course of the ureters, the more usual location of the strictures, as well as the inflammatory reactions accompanying the lesions, give rise to referred pains in the bladder, rectum, vagina, perineum, hip and thigh. The kidney discomfort varies from a dull backache to the most severe renal colic, depending on the degree of urinary stasis, ureteral kinking, or associated renal lesions. And, as in other kidney affections, the accompanying gastro-intestinal disturbances are noted.

Diagnosis.—A careful history is most important in making a diagnosis of ureteral stricture. Most of these patients are seen after one or more laparatomies have been performed for the relief of pain. Given a patient whose chief complaint is pelvic pain, the duration of which may be of several years' standing, aggravated by menstrual disturbances, presence of backaches, with bladder or gastro-intestinal symptoms, one should always suspect the lesion to be that of ureteral stricture. If to this is added the presence of

*Read before the 54th Annual Meeting of the Florida Medical Association, April, 1927.

tenderness along the course of one or both ureters, and on bimanual palpation one is able to elicit the pain of which the patient complains, together with the consideration of the cystoscopic findings or ureterograms, the diagnosis is certain beyond doubt.

The most important conditions associated with stricture of the ureter are:

- (1) Hydronephrosis.
- (2) Pyelitis:
 - (a) simple.
 - (b) of pregnancy.
 - (c) of the puerperium.
- (3) Essential or idiopathic hematuria.
- (4) Calculi.
- (5) Congenital malformations.

Unfortunately time and space do not permit a very thorough and detailed presentation of the most important conditions associated with strictures of the ureter. We are obliged to limit ourselves to a bare mention of the important findings encountered.

Hydronephrosis and Pyelitis.—These two conditions constitute by far the two most common disorders allied with strictures of the ureter. Hunner noticed that "hydronephrosis of a marked degree may be present without causing symptoms and without affording palpable signs of undue mobility. Also, a patient may be subject to repeated attacks simulating Dietl's crises in which there is agonizing pain, accompanied by the general symptoms of nausea, vomiting, chills and fever, headache, and profound prostration, and in which urinalysis may show blood, albumen, and casts, and even an abundance of leukocytes, in the absence of an infection." Similarly we find that a large percentage of pyelitis cases are associated with strictures. Some patients with pyelitis of pregnancy, and in whose cases strictures are found, give clear records of having had pyelitis in previous pregnancies and a symptomless period, with normal urine in the interval. In such cases, the stricture probably antedated the first attack of pyelitis. In practically all patients belonging to the category of ureteral stricture with secondary hydronephrosis, dilation results in much improvement, as seen by the lessening of pain, by shrinkage in the pelvis content, by an improvement in kidney function, and in kidneys with infection, by decided clearing up of pus and bacteria.

Calculi.—The number of strictures associated with renal calculi is so great as to bear a distinct relationship between the two conditions. Hunner finds strictures of the ureter in nearly 100% of his urinary stones. The important fact to bear in mind is that treatment of the stricture areas with restoration of normal drainage, prevents urinary stasis and subsequent stone formation.

Essential Hematurias.—We classify under the heading of idiopathic or essential hematurias, those cases of bleeding from the ureters or kidneys in which no demonstrable pathology is found in spite of the most exhaustive investigation. We have a number of cases of this type in which the diagnosis of stricture of the ureter was made and upon whom treatment of the stricture resulted in the disappearance of symptoms. During the past year I found three such cases in Miami, which have remained symptomless to date.

Congenital Malformations.—Curiously enough, the cases showing embryological malformations of the ureter or kidney seem to remain symptomless for indefinite periods of time, and only come to our attention when forced by symptoms such as those presented by ureteral strictures. Our attention is called here to the fact that the patient seeks advice not because of her developmental malformation but because of the symptoms resulting from strictures of the ureter.

We have been forced by the limitations of this article to casually mention the important points of interest in ureteral stricture and its allied disorders, but we have sufficient data in the form of clinical evidence and laboratory addenda to substantiate these statements. If the presentation of this resume calls to your attention the fact that the keynote of effective therapy is entirely dependent on adequate kidney drainage following dilatation of the stricture areas, our aim will have been rewarded. Numerous cases have demonstrated the disappearance of pain, the shrinkage of the pelvis content, the prevention of the formation and reformation of renal calculi, the marked improvement in renal function, and in infected kidneys, the decided clearing up of pus and bacteria, as proofs of our conclusions.

(It would be difficult to present a treatise on ureteral strictures without making reference to the exhaustive works of Hunner. Surely no subject has ever been more ardently sponsored nor more forcibly presented than ureteral strictures, and in the consideration of the present expose, I am indebted to him for the use of some of the slides as well as for the cases studied with him.)

URINARY OBSTRUCTION FROM CONTRACTURE OF THE VESICAL ORIFICE*

E. CLAY SHAW, M.D.,
Miami.

It has been estimated that 15% of the men of middle age or beyond seek medical relief for symptoms of lower urinary tract obstruction. There are probably many other individuals having such symptoms but who do not consult the physician because they have become reconciled to the erroneous belief that urinary troubles are natural concomitants of advancing years.

The large adenomatous hypertrophies and carcinomata of the prostate are readily diagnosed by rectal examination and the indications for prostatectomy are usually clear cut. There is another group of cases, however, whose symptoms may be equally severe but whose prostates on rectal examination are found not to be enlarged. For these cases the French have coined the descriptive phrase, "Prostatism sans prostate." The obstruction is usually caused by contractures, bars or nodules so situated about the bladder neck as to constrict the lumen of the outlet.

The frequency of occurrence of such obstructions was strikingly shown by Alexander Randall's study of 300 autopsies on unselected adult males. He found 54 cases of median bar formation, 18 of which showed obstructive changes in the bladder and kidneys. Like prostatic hypertrophy, contractures of the vesical orifice occur more frequently in individuals of middle age or beyond, but there is no period of life immune. Many cases have been reported in individuals in the second and third decades.

There are apparently two distinct, though often associated, pathological processes that may be responsible for contractures and bar formations about the vesical orifice. There is a group of glands situated beneath the trigone and posterior lip of the margin of the vesical orifice known as Albarran's glands that, at times from an unknown cause, become hypertrophied. This thickens and elevates the posterior lip, forming a bar or nodule that impinges upon the lumen of the urethra at the point of its junction with the bladder. The other pathological process is one of inflammation that results in the deposition

of fibrous tissue beneath the mucous membrane with resulting constriction and loss of elasticity of the structures surrounding the orifice. Whether the urethral narrowing results from glandular hypertrophy, fibrous constriction, or from a combination of the two, the effect is the same and there occurs an obstruction to the normal passage of urine. Urinary obstruction from contractures of the vesical orifice produces the same pathological changes in the upper urinary tract as are observed in cases of prostatic hypertrophy. The bladder becomes hypertrophied and trabeculated, diverticula are not infrequent and the residual urine provides a favorable media for infection. Hydronephrosis results from the back pressure and is often associated with pyelonephritis and impairment of renal function.

The symptoms are also similar to those encountered in hypertrophy cases. The patient develops urinary frequency, nocturia, painful urination, hesitancy on starting, diminution in size and force of urinary stream that not infrequently culminates in complete retention or paradoxical incontinence. The course is often slow and insidious and it is unfortunate that extensive bladder and kidney pathology may develop before the symptoms become sufficiently severe as to cause the patient to realize the seriousness of his condition.

The diagnosis can only be made with the cystoscope. If a median bar is present, on turning the cystoscope posteriorly, the normal concavity of the vesical orifice is broken by the appearance of a rounded elevation. This elevation also breaks the visible continuity of urethra and bladder unless the handle of the cystoscope is elevated. Should there be a true inflammatory contracture present, the picture is usually that of a sharp constricting ridge completely surrounding the orifice, often associated with a pallor of the overlying mucous membrane.

The satisfactory treatment of these cases dates from the presentation of the punch instrument by Young in 1910. The original has undergone modifications by the inventor and others, notably Caulk of St. Louis. The instrument now in general use consists of a fenestrated metal sheath through which a circular cautery blade is manipulated. The instrument is introduced into the bladder and obturator withdrawn, following which the sheath is pulled out until the obstruc-

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ting part falls into the fenestra. The circular cautery blade after being brought to the desired heat is driven home and the tissue removed by a quick cut. In Young's original instrument excision was accomplished with a cutting blade but the occurrence of an occasional serious hemorrhage by this method made the cautery blade a welcomed improvement. A general anæsthetic is usually unnecessary; Young depends on a simple instillation of novocain into the posterior urethra and bladder, while Caulk infiltrates the part to be removed with a long needle introduced through the sheath of the instrument. The number of cuts required depends upon the location and size of obstructing tissue.

Attempts have been made by several to extend the use of the punch instrument to obstructions other than simple contractures and bars. It has been used in early cases of adenomatous prostatic hypertrophy and in moderate obstruction from carcinoma with at times good effect.

REPORT OF CASES.

I wish to report briefly a personal series of 18 cases upon which the punch operation was performed. The youngest patient was 19 years of age, the oldest 76 and the average age 58. Median bar formation was present in 13, fibrous contractures predominated in 2. There were 2 early cases of adenomatous prostatic hypertrophy with cleft formation intravesically but without enlargement by rectum. The remaining case was that of the boy of 19, who presented an unusual cystoscopic picture. There was a pedunculated nodule attached to the posterior surface of the urethra immediately behind the verumontanum that acted as a ball valve and almost completely blocked the urethra on urination. The vesical orifice itself was normal. The nodule was almost 1 cm. in diameter and was subsequently found to be tuberculous.

All of these cases had obstructive symptoms, and the majority had been treated with dilations, prostatic massage and other palliative measures without improvement. Nicturia and diminution in size of stream were present in all. There was complete retention in 2 while residual urine exceeding 50 cc. was present in 11. There were 9 that complained of pain on urination. The renal function as determined by the phenolsulphenphthalein test was definitely impaired in 10 cases, 3 of which were uremic at the time of the first examination.

In 2 of these cases the punch was associated with a suprapubic operation for the correction of bladder pathology resulting from the bladder neck obstruction. In one case a diverticulum with a capacity of 300 cc. was removed; the other was an uremic patient with a large bladder calculus in which suprapubic lithotomy seemed preferable to lithopaxy. In the remaining 16 cases the punch was the only operative procedure employed.

All of these cases were subjected to multiple cuts—usually 3—the first cut being made through the center of the median bar and followed by one on either side. There was only one troublesome hemorrhage encountered and this was effectively checked by the use of a retention catheter. Post-operative chill and elevation of temperature occurred in 2 instances. Epididymitis was a complication in 2 cases.

There were no deaths though several of these patients would have been poor risks for major surgical procedure. Within one month following operation 8 cases were free of symptoms, voiding normally and had no residual urine; 7 were greatly improved, 1 was slightly improved and 2 were unimproved. One of the last group was subsequently cured by a second punch operation; the other was one of the cases of adenomatous hypertrophy and in retrospect the use of the punch seems to have been ill advised. He was later subjected to prostatectomy and two definitely enlarged lobes removed.

SUMMARY.

A series of 18 cases of contracture of the vesical orifice or median bar formation with obstructive symptoms and without prostatic enlargement have been presented. The diagnosis in every case was made with the cystoscope. After one month following operation 50% experienced complete relief of symptoms and the others showed improvement. There were no severe complications and no fatalities.

In conclusion I wish to stress the importance of cystoscopic examination for all patients having chronic urinary symptoms, as it is only from such an examination that median bars and contractures of the vesical orifice can be diagnosed. If cystoscopy is insisted upon, we will detect many urinary obstructions in their incipency and will be able to correct them with a minor surgical procedure before the more serious bladder and kidney pathology develops.

JOINT DISCUSSION

Dr. John E. Hall, West Palm Beach:

Both Dr. Panettiere and Dr. Shaw are to be congratulated upon the presentation of their interesting papers.

In discussing Dr. Panettiere's paper, I will state that until very recent years scant attention was paid ureteral strictures, the condition being held to be congenital.

Kelly was among the first to recognize that strictures were produced by the pyogenic bacteria. He thought the tubercle bacillus was more often responsible for the production of this condition than any other pus-producing micro-organism.

Furniss believes that inflammation of the ureter, followed by infiltration and stricture formation, is practically always secondary to acute hematogenous infection of the kidney.

Burnham and Kelly think that traumatic stricture of the lower end of the ureter is common, following injuries of labor and cervical operations of the uterus.

Hunner, excluding strictures due to tuberculosis and calculous origin, classifies them as simple chronic strictures, having their origin in infection carried to the ureteral walls from distant foci, such as: diseased teeth, tonsils, sinuses, or intestinal tract. He holds that stricture of the ureter is rarely congenital, stating that this condition is seldom seen prior to adult life, and that bilateral stricture must be the result of systemic infection, that cystitis is rarely seen associated with stricture. Conversely, he does not believe that stricture of the ureter follows cystitis. He regards any case of pyelonephritis which does not respond to pelvic lavage as probably being due to ureteral stricture, especially if lavage is followed by acute pyelonephritis, with chills, high fever, pain, nausea and vomiting. He states infection of the urine does not take place until the lumen of the ureter has narrowed to the point where stasis takes place in the kidney pelvis.

Bransford Lewis regards the colon bacillus as the most common germ, causing ureteritis and stricture formation.

Eisendrath, of Chicago, regards strictures situated near the bladder as congenital in character, but Belfield, of the same city, states that many strictures situated in this locality, in men, are due to chronic seminal vesiculitis. The ureters and vesicles lying in close apposition at this

point, and an inflammatory condition of the vesicles frequently extends to the ureters, causing a peri-ureteritis, and ureteritis, resulting in stricture.

Syphilis is accredited with being the cause in quite a few cases.

The diagnosis of the condition is made by the passage of catheters with the "wax-bulbs." These pass without meeting obstruction, but on withdrawal, hang at the point of the constriction.

Kolischer, of Chicago, warns against this being considered as absolutely diagnostic, stating that in pregnant women, in whom œdema of the ureters is frequently encountered, that this œdema offers resistance to the withdrawal of such catheters.

Kinking of the ureter in nephroptosis is responsible for errors in diagnosis. Kinking, however, is one of the etiological factors producing stricture, as retention above the kink causes injury to the epithelial lining of the ureter sufficient to bring about organic changes of fibrous nature.

The diagnosis of ureteral stricture is sometimes erroneously made, when a single attempt at ureteral catheterization fails on account of an obstruction being met with. One should be guarded in stating that a stricture is present, for it often happens that at the next cystoscopy, no such obstruction is found, the catheter passing readily to the kidney pelvis. Such temporary obstruction may be due to a kink, or to some extraneous condition, offering mechanical obstruction for the time being.

In this connection, it may be stated that the novice attempting ureteral catheterization, fails to pass his catheters on account of the lack of bladder distention with water. Such lack causes the bladder end of the ureter to sag, or kink, and this engages the end of the catheter.

Probably the best method of arriving at a correct diagnosis is to withdraw the catheter below the site of the obstruction and inject an opaque solution, and have an uretero-pyelogram made at the time the solution is being injected. This outlines the constricted portion, as well as the dilated portion above the obstruction. Braasch, however, claims that this is not absolutely diagnostic, stating that spasm of the ureteral walls may take place, giving a temporary obstruction. This possibility may be safely disregarded.

As stated by Dr. Shaw, a submucous inflammation, localized in the region of the sphincter of the bladder, ultimately results in contracture of the neck of the bladder, due to a deposit of fibro-plastic material around it.

When the inflammatory process is circumscribed, and confined to the limits of the prostate, it produces a hard contracted body, due to the deposit of such material and elimination of the glandular tissue, forming the small hard prostate in the middle isthmus; or a circumferential deposit around the vesical neck, producing constriction, or stricture.

Such type of obstruction cannot be enucleated, and the best method of dealing with it is the galvano-cautery incision, through a perineal opening, if the obstruction consists of a distinct median-bar, or bridge formation.

Dr. Shaw told you that the most satisfactory treatment of these cases was by means of the "punch" instrument, devised by Young, in 1910.

I think this statement should be qualified, as it is conceded that there are certain forms of obstruction at the neck of the bladder in which Chetwood's operation is indicated, rather than Young's "punch" operation.

The punch operation had a mortality of around ten per cent, which is about six per cent higher than either the supra-pubic, or perineal prostatectomy. Uncontrollable bleeding sometimes followed this procedure.

As stated before, both papers are excellent, and I am honored by being asked to discuss them.

Dr. Roy J. Holmes, Miami:

If I had heard Dr. Panettiere's paper several years ago, I would have undoubtedly classified him as simply another member of the Kelly-Hunner school of fanatics on the subject of ureteral stricture. Most of us received our urological training from men who were opposed to the idea of ureteral strictures being as prevalent as Hunner would have us believe. Practically all of these men are now doing ureteral stricture work, and most of them are very enthusiastic in their praise of Dr. Hunner and his co-workers. Personally, I never looked for ureteral strictures until about two years ago. I found them without looking for them. Now the waxed-bulb catheter is used as almost a routine measure in our cystoscopic examinations of women.

Carson of the University of Maryland has recently done some very excellent work in re-

porting forty autopsies on pregnant women with especial attention to the condition of the ureters at the time of death. In practically every instance, the pregnant uterus was seen to be resting upon the right ureter, and from that point upward the ureter was definitely dilated. In several instances, the pelvic portion of the right ureter was actually seen to be flattened out, and readily filled with urine when the uterus was brought forward. His report is very convincing in regard to the inflammatory reaction which, according to his statement, occurs almost without exception as the result of this pressure upon the ureter. Hunner found 34 cases of ureteral stricture in 35 cases of pyelitis of pregnancy. Can it be possible that this accounts for a great many of the ureteral strictures in women, and for the fact that pyelitis of pregnancy involves the right side in fully 80 per cent of all cases, if unilateral? Certainly, ureteral stricture is one of the most common causes of urinary stasis, and urinary stasis is responsible not only for most kidney infections but also for the perpetuation of practically every type of urinary infection.

Dr. Shaw should certainly be congratulated on the excellent manner in which he has presented his subject. Try as I may, I can think of nothing that can be added.

Dr. Gideon Timberlake, St. Petersburg:

Just recently, due more to necessity than all else, I devised a scheme for electro-coagulation of bladder tumors—under water. This features an adjustable electrode for use with bipolar current with an "E" or "B" guitar string of steel. This is so arranged that the current is transferred just as though the electrode were used within an ureter catheter. Insertion into, or transfixing such masses, and creating destruction has proven most simple and efficient. These are to be employed by the indirect method. The others are of the inflexible type, shorter in length, and to be used through the air cystoscopes or endoscopes. Further, for electro-coagulation of tonsils, pharyngeal and laryngeal neoplasms, they have their place for the laryngologists.

I am very grateful to both you gentlemen for the very intelligently conceived presentations of these subjects.

Dr. C. Panettiere, (closing):

I thank you, gentlemen, for the discussion and am pleased with the fact that the subject of ureteral stricture is quite alive. I should like to see that interest kept up.

Dr. E. Clay Shaw, Miami, (closing):

I do not agree with Dr. Hall that the punch operation properly performed on selected cases should be considered a dangerous procedure. The mortality rate is less than prostatectomy. I have yet to see a serious hemorrhage follow the use of the cautery punch.

OSTEITIS DEFORMANS (PAGET'S DISEASE).*

J. W. SNYDER, M.D., F.A.C.S.,
Miami.

A recently observed case of Paget's disease presented unusual features in that both trauma and syphilis appeared so prominently in the history as to be misleading. My feeling that Paget's disease, although considered a rare disease, is characterized by certain features which should make it interesting to the surgeon, is confirmed by a review of the literature on this disease. The marked bony deformities, skull enlargement, cranial nerve pressure effects, occasional spontaneous fractures, easy confusion with bone or brain tumors and other features in cases of this little recognized disease may invite unnecessary and unwarranted surgical intervention. It seems worthwhile, therefore, to present the following case and also to give a general description of Paget's disease.

Mrs. G. was first seen on November 30th, 1926; age 52 years, married, of Irish descent. The family history is negative except for one sister who has rheumatism and heart trouble. No other bone disease in the family. She was married in 1910; no pregnancies; husband living and well. Menses normal to one year ago, now irregular. She had diphtheria and tonsilitis as a child and malaria at the age of 16 years. Pleurisy in 1911. Coffee and tea are used in moderation.

At the age of 25 years she mixed tooth brushes and later found that a son of the family with whom she was staying had syphilis. She developed a sore on the gum which was followed by a general copper-colored rash over the body with sore throat and loss of hair. A diagnosis of

syphilis was made and she took tablets for one year. No further treatment was taken until recently, when she received several intravenous injections.

She suffered from stomach trouble since an attack of malaria at the age of 15 years. This consisted of a sense of epigastric pressure and suffocation with vomiting before and after meals. She had slight epigastric burning which was present all the time. No colic or jaundice. The stomach was explored in 1908 with negative findings.

In 1911 she had pleurisy with bilateral pleural effusions which were aspirated. A diagnosis of pericarditis was also made at the same time.

In 1922 she bruised the left tibia. Six months later the left leg began to swell without pain; the head began to enlarge at the same time. Both head and tibia have continued to enlarge since that time. There is no severe pain, but the bones are tender to pressure and she has a throbbing sensation in the head. The left tibia became thickened and bent with shortening of the left leg. She has some pain in the left hip, knee and ankle.

The hearing in the right ear was lost four years ago.

She had had leukorrhea for the past 15 years, worse for the past year. The discharge is mucopurulent, never bloody.

Examination showed a middle-aged woman who walked with a limp. The posture was



Fig. 1. Paget's Disease of the Skull.

*Read before Florida Railway Surgeons' Association, West Palm Beach, April, 1927.

moderately stooped and the head unusually large. Her height was 5 feet 5 inches and weight 116 pounds, a loss of 20 pounds from normal. The skull was enlarged, measuring 23 inches in circumference. The surface was tender to pressure with no soft areas, nodules or crackling. Hair dry and thin. The features were of normal size; the eyes negative; tonsils moderately enlarged; teeth poor with several crowns and pyorrhoea. There was moderate dorsal kyphosis with a square funnel-type chest. The lungs were negative. A systolic murmur was present at the apex of the heart which was transmitted into the axilla. The apex was inside the nipple line, rhythm regular. The abdomen was negative except for a midline epigastric scar of previous exploration. The left tibia was thickened and curved anteriorly and externally with 1 inch of apparent shortening. No other bony abnormalities were discovered. The pelvic organs were atrophic, but otherwise normal. The reflexes were normal. Examination of the blood and urine was negative. The blood calcium showed 9.2 mg. per 100 c.c., N. P. N., 33.8 mg., blood sugar 94.1 mg. Two Wassermann tests were negative. The Roentgenological examination, which Dr. Raap will discuss later, showed extensive changes, typical of Paget's disease.

Paget's description of this disease (which he termed osteitis deformans), although written in 1876, is so comprehensive and accurate that comparatively little has been since added to his work. Five cases were cited in his original article; thirteen years later he stated that in all he had observed twenty-three cases.

While the disease is usually considered quite rare, as evidenced by three cases among 30,000 admissions to the Johns Hopkins Hospital (Hurwitz) and a like number among 38,000 admissions to the Jefferson Hospital of Philadelphia (Da Costa), Locke of Boston states that he has personally studied forty-eight cases and has seen probably as many more. He believes that with the exception of syphilis, Paget's disease is the most common chronic bone disease.

The cause of the disease is entirely unknown. Paget believed the process due to a chronic inflammation of the bones. Hutchinson thought it due to a contusion of one bone with an extension of inflammation to others. The similarity of the process to arthritis deformans has been noted. Gout, congenital syphilis, arteriosclerosis, trophic disturbances and faulty metabolism



Fig. 2. Paget's Disease Involving the Left Tibia.

have been mentioned as causative factors by various authors.

A more recent and alluring theory is that the bone changes result from a disturbance of function of certain endocrine glands, although pathological studies to the present have not demonstrated consistent abnormality in any part of the endocrine system.

Locke finds a familial tendency toward the disease in ten of forty-eight cases.

The disease affects most frequently the long bones of the lower extremity and the skull, although any or all bones of the skeleton may be involved. The involvement is bilateral but asymmetrical. The gross changes consist of a marked thickening with softening and, in case of the long bones, definite bowing. The normal curves of the long bones are accentuated and actual lengthening occurs, but, because of the bowing and torsion, apparent shortening results. The diseased bone appears thick and misshapen with an irregular nodular surface, showing many perforations for the admission of blood vessels.

Section of the bone shows a definitely altered structure. The periosteum is vascular and adherent. The solid cortical bone is replaced by a reticulated sponge-like structure with an abundant blood supply. Interposed in this formation are occasional islands of bone of ivory hardness. The marrow cavity may be encroached upon and even obliterated by this newly formed tissue. Small spaces filled with reddish gelatinous

material, so-called bone cysts, are occasionally encountered. The general process may be stated as that of bone destruction by osteoclasts and simultaneous replacement by newly formed osteoid tissue, which is imperfect and incomplete as regards production of mature bone, with a resultant overproduction of osteoid tissue and marked deformity of the contour of the involved bone.

The skull participates in the general osseous change in a characteristic manner. The calvarium is enlarged with thickening of the bone to three or four times normal. Pearce reported a case in which the occipital bone measured one and one-half inches in thickness. The substance of the bone is soft, cutting readily with a knife. The cranial cavity is encroached upon very slowly, as the inner table of the skull participates very little in the proliferative changes. The outer table on the contrary is markedly thickened and presents a very hazy structure with interspersed areas of denser bone as seen by the Roentgen Ray.

The base of the skull participates in the bone changes to a lesser degree. Gradual thickening of the bone leads to final narrowing of the basal foramina with pressure on one or more of the cranial nerves.

Bones of the face seldom share in the disease process, although enlargement of the mandible and malar bones has been noted. The enlargement of the cranium is uniform and the resultant picture is that of a large square head, which is in contrast to a face whose features are of normal size.



Fig. 3. Paget's Disease Involving the Pelvis.

The spine in advanced cases is markedly changed. The bodies of the vertebrae are thickened, softened and appear as if jammed together and an extreme kyphosis is present in the upper dorsal region, so that the neck appears shortened and bent forward, causing the head to appear as if resting on the shoulders with the chin close to the sternum. The thorax is short and cramped-appearing, as if crowded into the abdomen. The clavicles may show great thickening and deformity.

The pelvis participates relatively early, sometimes before changes appear in the skull. Thickening and pelvic deformity result.

Cardio-vascular changes so commonly accompany bony changes in Paget's disease, that they are considered more than incidental. Mitral and aortic lesions due to sclerosis are frequent and apoplexy or cardiac failure is a frequent terminal event.

Paget's description of osteitis deformans is as follows: "It begins in middle age or later, is very slow in progress, may continue for many years without influence on the general health and may give no other troubles than those which are due to the change of shape, size and direction of the diseased bones. Even when the skull is largely thickened, and all its bones exceedingly altered in structure, the mind remains unaffected.

The disease affects most frequently the long bones of the lower extremities and the skull, and is usually symmetrical. The bones enlarge and soften and those bearing weight yield and become unnaturally curved and misshapen. The spine, whether by yielding to the weight of the over-grown skull or by change in its own structure, may sink and seem to shorten with greatly increased dorsal and lumbar curves; the pelvis may become wide; the necks of the femora may become nearly horizontal, but the limbs, however misshapen, remain strong and fit to support the trunk. In its earlier period and sometimes throughout all its course, the disease is attended with pains in the affected bones, pains widely varied in severity and variously described as rheumatic, gouty or neuralgic, not especially nocturnal or periodical. It is not attended with fever; no characteristic condition of urine or feces have been found in it. It is not associated with syphilis or any other known constitutional disease unless it be cancer.

In all cases I have seen the general appearance, postures and the movements of the patients have

been so alike, that these alone might suffice for the diagnosis of the disease. The most characteristic are the loss of height, indicated in the low position of the hands, when arms are hanging down, the low stooping with very round shoulders and the head far forward and with the chin raised, as if to clear the upper edge of the sternum, the chest sunken toward the pelvis, the abdomen pendulous, the curved limbs held apart and usually with one advanced in front of the other and both knees slightly bent; ankles overhung by the legs and toes turned out. The enlarged cranium, square looking or bossed, may add distinctiveness to these characters and they are completed in the slow and awkward gait of the patients and in the shallow costal breathing, compensated by wide movements of the diaphragm and abdominal wall, and in deep breathing by the uplifted shoulders."

Gradual enlargement of the head necessitates a frequent increase in the size of hat, while loss in height necessitates shortening of trousers or skirt. The individual may appear gradually shrinking, but in spite of very evident changes most cases attribute all symptoms to advancing age and seldom seek advice unless driven to it by pain or disability.

Various authors have described a mono-osteitic type of Paget's disease in which only one bone was affected. Whether this classification should be made is a disputed point. It is probable that Paget's disease frequently begins in a single bone and gradually extends to others. Leri cites a case in which pain appeared in the tibia at 33 years, a deformity of the bone at 52 years and a deformity of the opposite tibia and radius at 63 years. Carman questions whether in the mono-osteitic type of case a more general involvement might not be shown by the Roentgen Ray.

Pathological fractures are not common but do occur in Paget's disease. Nine of Locke's forty-eight cases gave a history of spontaneous fracture, four of them on two different occasions. Lewald reports six in fourteen cases. Auffret's case had four fractures. Union and callus formation are normal and satisfactory as to subsequent function.

Malignant changes usually of a sarcomatous nature occasionally develop in the affected bone. It is a terminal process after the disease has been present many years. Carman cites such a case with pathological fracture.

On the other hand, Paget's disease involving the pelvis and lumbar spine may be mistaken for metastatic malignancy of the osteoplastic type. In four cases Carman reports such an error. He believes that if a primary malignancy is not evident, other bones, especially those of the skull and extremities, should be rayed for evidence of Paget's disease.

Cases diagnosed as ethmoiditis or as various neuralgias of the head are frequently shown to be Paget's disease, thanks to the more routine employment of the Roentgen Ray in diagnosis. Narrowing of the basal foramina of the skull produces loss of function or painful stimuli as the cranial nerves are compressed. Seventh nerve (facial) paralysis is frequent and spinal accessory paralysis with shoulder drop has been noted. A fifth nerve, or tri-facial neuralgia may be of similar origin. Deafness or loss of vision may occur in a similar manner.

The picture of brain tumor may be simulated by reason of increased intra-cranial pressure due to late thickening of the inner table of the skull and diminution of the cranial capacity.

In differential diagnosis acromegaly presents changes in the long bones and skull which superficially resemble Paget's disease. The hands, face and feet are symmetrically enlarged in acromegaly and unaffected in Paget's. The Roentgenological picture is distinctive in each condition.

Leontiasis ossea is described as a diffuse hypertrophy of the entire skull, especially of the bones of the face, without involvement of other parts of the skeleton.

In osteomalacia the predominating bone change is atrophy and decalcification, and when deformity occurs it is angular. There are no cranial lesions.

Syphilitic periostitis produces a thickening of the cortex along the convex side of the bone. The Roentgenological picture is characteristic while the Wassermann test and clinical picture aid in differentiation.

The lesions of osteitis fibrosa cystica may show an extensive distribution, but the picture is that of cyst and tumor formation. Spontaneous fractures are frequent.

With few exceptions the course of Paget's disease is steadily progressive with more and more disability. Pain frequently ceases and the disease itself may become stationary. This is

associated with an increasing deposit of calcium in the osteoid tissue, evidently an attempt at tissue differentiation or maturation.

Many cases of Paget's disease attain a ripe old age. Death usually occurs from cardiovascular disease, while sarcoma of the bone occupies second place as a terminal event. A few cases have shown a final cachexia without evidence of malignancy.

The treatment of the disease is symptomatic. For relief of pain all opiates should be avoided, as the discomfort may be present for many years. Osteotomy to correct deformities has been employed, but without much benefit.

In conclusion, the importance of Paget's disease, to the surgeon, is chiefly in the recognition of the disease. If my paper has given a clear picture and thus made the recognition easier, it will have served its purpose.

As the Roentgenological findings are so important in the diagnosis of Paget's disease and in its differentiation from other conditions, I have asked Dr. Raap to discuss this disease from the roentgenological standpoint.

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ROENTGENOLOGIC CHARACTERISTICS AND DIFFERENTIATION IN PAGET'S DISEASE (OSTEITIS DEFORMANS).*

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Since these remarks are in the nature of addenda to the foregoing paper, we shall make them as succinct as possible and attempt rather to demonstrate the salient points in the illustrative films.

Paget's disease is revealed radiographically by changes in all the characteristics by which we describe bone structures. Since it is a disease process of progressive type, usually accompanied by extension of the changes into various parts of the osseous system, we may expect to find that the lesions in any one part of the skeleton differ in degree and type of change from those in another part, dependent on the stage of involvement in which we study it. Moore has described these changes as occurring in the size or bulk, texture, form, and outline. The increase in size seems to be due neither to internal expansion nor to bone accretion or apposition. As to texture, the disease at first produces a rarefaction, which may simulate the cystic and has even been described as a transparency of the cortical bone. This is later replaced by a coarse reticulation, which on post-mortem examination is found to be due to a spongy bone framework, the interstices of which are filled with a soft tissue containing practically no calcium. Later we find erratic bone proliferation of varying degree which produces the patchy hyperostosis commonly seen. As a result of these alterations in size and bulk, structure and texture, the form of the bone involved is bound to change in the later stages of the disease. The replacement of normal bone by spongy bone and acalcific tissue allows the weight-bearing bones to bend or fracture, depending on the rapidity of progress in these lesions or the incidence of trauma. For this reason the disease is most often discovered during examination for fracture or on account of the development of bowed legs or the discovery of a soft spot in the cranium or by reason of the necessity of repeated dental or rhinologic surgical procedures which should normally be effective in a single operation. Except in the bones of the skull, the outlines of the various components of the bone, cortex and medulla can be quite well differentiated, even in the last stages of the disease.

Dr. Carman's description of roentgen pathology was always very lucid and his notes on this disease are no exception. "The whole architecture of the bone is altered, the essential features being porosis and the formation of new bone with hyperostosis, one or the other processes predominating in different parts. In later stages, the new bone tends to become sclerosed and takes on a dense white appearance with decreased permeability to roentgen ray. The struc-

*Read before Florida Railway Surgeons' Association, West Palm Beach, April, 1927.

ture of the bone appears to be almost entirely removed and laid down afresh on a different plan and in a larger mold. The long bones lose their clean-cut outline, they become curved and thickening appears to be greatest on the convex surface. In some places subperiosteal thickening is seen, while in others decalcification beneath the periosteum has progressed irregularly. Small cysts are seen but rarely."

This disease should be of interest to this body of surgeons chiefly on account of its academic and medico-legal aspect. After the diagnosis has been made there is little use trying to treat it. Any fracture which shows itself in your practice should be examined with the possibility of its being a pathologic fracture. In connection with its very frequent symptom, headache, it should indicate the advisability of roentgen ray examination in all obstinate cases. The reason most of the early cases have been discovered is the fact that roentgen changes were noted before alarming symptoms had developed.

Paget's disease must be differentiated from any bone pathology which produces changes in bulk, size, shape, or density. Although so little is known about its etiology, it is pathologically probably most closely related to osteitis fibrosa cystica and osteomalacia. It has been suggested that on the basis of a toxic etiology, the vitality of the patient, the resistance of the host, and the virulence of the toxic factors are the criteria which determine the incidence of osteomalacia, osteitis fibrosa cystica or osteitis deformans, the first occurring where there is little or no resistance, the second where the system becomes suddenly overwhelmed, and the third where the toxin has a long hard fight to produce changes. This is to a certain degree borne out by the rapidity of development in each of these pathologies.

Osteitis deformans and osteitis fibrosa cystica are differentiated by the more rapid onset of the latter, the clinical history which does not usually show such features as headache and severe pain, and the radiographic findings which characterize the cystic type as a diaphyseal process of medullar rather than cortical origin. Trabeculation is less marked and there is a greater tendency toward fracture.

Osteomalacia produces no evident enlargement of the bone and no bowing. The fractures are usually of the angular type and the process is one of progressive bone rarefaction without

much bone proliferation. It has a more uniformly progressive pathology than Paget's.

The localized bone lesions of syphilis show more osteoclasia than does Paget's and the evidences of repair and sclerosis are definitely more pronounced. Pain is more severe and the occurrence in young people is more frequent. In the diffuse type of syphilis, its diaphyseal site and the character of the periosteal proliferation is sufficiently typical.

The closest similarity in X-Ray appearance might be produced by symmetrical osteoplastic carcinomatosis. In fact Carman reports three cases in which the diagnosis of malignant metastasis of this type had been reported and in which the diagnosis was later changed to osteitis. This similarity is also used as a reason for the toxic theory in its etiology. Malignancy is usually not symmetrical. In general, carcinomatosis shows little or no reparative process, and the lesions are even more bizarre than those of Paget's. Localized malignancies and neoplasms show slow expansion of the bone from within or bone accretion.

Exostoses, hypertrophies and chronic bone infections present either increased normal bone or exaggerated repair processes. The involvement is not usually symmetrical and the clinical history is typical.

The fact that leontiasis ossii and hyperostosis cranii were described more frequently about the time of Paget's treatise may mean that these are only manifestations of the same disease. Their resemblance to a localized type of Paget's is a close one. The fact that they occur so frequently about the nose and the accessory air-spaces of the skull is held to support the theory of infection.

Although usually involving several bones at one time, in order of frequency, the tibia, femur, skull, and other parts, a few cases of the mono-osteitic type have been reported. As more cases are reported and the diagnosis made in the earlier stages, the mono-osteitic variety will probably be more frequent; cases involving only metacarpal and metatarsal bones have been reported as well as those involving only the pelvis.

One question has arisen in the writer's mind during the compilation of this data—since Pagetic bone changes are usually accompanied by marked arteriosclerotic changes in the adjacent vessels as well as cardiovascular changes, and since films have demonstrated that occasionally sclerotic vessels disappear under a regime of

diathermy, what would be the effect of diathermy on Paget's disease? I find no record of such therapy and pass this suggestion on to you, for investigation, if a case of this type comes under your observation.

SYPHILIS*

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Sir William Osler said, "Know syphilis in all its relations and manifestations and all other things clinical will be added unto you."

This great physician meant to say in making such an assertion, that no man knows this disease, whose very origin is shrouded in mystery. The origination of most diseases may be traced with a more or less degree of accuracy, but not so with syphilis, for God, man and beast have, in succession, been held responsible for the beginning of this dread scourge.

It is contended by some that it antedates the time of Moses, and that God had reference to it when, in the twentieth chapter of Exodus, in one of the commandments said to have been given Moses, He declares, "For I, the Lord, thy God, am a jealous God, visiting the iniquities of the fathers upon the children, unto the third and fourth generation of them that hate Me."

Those who believe in its Biblical antiquity state that reference is again made to it in the Book of Psalms, Chapter 38, verses 3 to 7, inclusive. This reads: "There is no soundness in my flesh because of thy indignation; neither is there any health in my bones because of my sin. For mine iniquities are gone over my head; as an heavy burden, they are too heavy for me. My wounds stink and are corrupt, because of my foolishness. I am pained and bowed down greatly; I go mourning all the day long; for my loins are filled with burning, and there is no soundness in my flesh."

To offset these contentions as to syphilis being known in Biblical times, it is stated by renowned scientists and investigators that there is conclusive evidence offered by the only parts of the human body which, under favorable conditions, withstand the ravages of time and maintain their original form after death. These are the bones. Since it is known that syphilis attacks the bones, these dumb but necessarily infallible

witnesses were appealed to for proof of the existence of syphilis in the Old World, both in prehistoric and historic time up to 1492. Careful search was made amongst unnumbered thousands of human skeletons of historic, antique and medieval origin in India, Greece, Italy, Germany, France and England, and not one single bone showing undoubted syphilitic changes has been found. As far as Europe is concerned, we have every reason to believe that syphilis was entirely unknown until the discovery of America.

Columbus sailed from Seville, Spain, on August 4th, 1492, landing on the Island of Haiti October 12th of the same year. Members of his crew contracted the disease, and on the return of the expedition to Spain, on March 15th, 1493, scattered it broadcast. Ruy de Isla, one of the most renowned surgeons of his day, practicing at Barcelona, Spain, stated that prior to the return of Columbus, the disease was entirely unknown in Spain.

Toward the end of the year 1493, Charles VIII, King of France, raised an army to invade Italy. This army was composed of hired soldiers from Spain, Switzerland, Hungary, and many other countries of Europe. It was said that there were above 14,000 Spanish prostitutes alone, not counting those of other nationalities, following King Charles' army.

Charles captured Naples on February 22nd, 1495, and shortly after, his army was disbanded. These hired soldiers returning home, conveyed the infection of syphilis to all parts of Europe, they having contracted it in Italy from Spanish women, who had brought it from their own country.

The disease is said to have reached Bristol, England, by way of Bordeaux, France, in 1497, but the early records of syphilis are singularly scanty, and it is not until 1503 that an entry appears in the Privy Purse Expenses of Elizabeth of York, Queen of Henry VII, "Concerning twenty shillings paid to a surgeon who healed John Petriche, one of the sonnes of Mad Beale, of the French Pox." The Scotch surgeons make no report of its appearance in Aberdeen, Edinburgh and Glasgow until the latter part of 1497.

In omitting all description of the disease itself, and passing directly from the historical origin to the treatment, it is well to bear in mind that the spirochæta pallida, or micro-organism causing this disease, was not discovered by the German scientists, Schaudinn and Hoffman, until

*Read before the Hillsboro County Medical Society, at Tampa, May 17th, 1927.

1905. More real progress has been made toward establishing the treatment of syphilis on a scientific basis since their valuable discovery, than was made during all preceding centuries.

Let us now take up in detail the steps which should be employed in the management of this disease in its initial stages. As a rule, the patient comes to us within a few days after the appearance of the sore, or sores, for advice and treatment. What shall we do, use palliative or expectant treatment, or institute radical anti-syphilitic treatment? How many of us are able to say from the appearance of the lesion that we are dealing with a syphilitic condition? Are we justified in concluding from the clinical aspect of the sore alone that it is luetic, and in telling the patient it is syphilis? When we make such an assertion we are dooming the patient to long continued treatment, and to the mental horror such knowledge entails. This preys upon the minds of some patients who are morbidly inclined to such an extent that they commit suicide. I have had two patients kill themselves after being told they had this disease.

If one is practicing in a city, and is not equipped to make a "dark-field" examination, he may send his patient to a laboratory for such examination. If the sore be syphilitic, the spirochæta pallida will usually be found. Negative "dark-field" reports do not always signify that syphilis does not exist, for if the sore has been cauterized, or medication applied, the spirochæta pallida will, in all probability, not be found. One should not rely upon a single negative report, but should instruct the patient to report to the laboratory for several consecutive daily examinations. If these examinations are persistently negative, one is then justified in treating the sore locally, in order to heal it up. The patient, however, should not be told that he does not have syphilis, but rather, should be instructed to return within four to five weeks in order that his blood may be taken for a Wassermann test. It is relatively common to have the blood of such patients show strongly positive within a few weeks after these negative "dark-field" examinations, so one should be guarded in committing himself one way or another. It is better to adopt the late Mr. Wilson's policy of "watchful waiting" in the making of a diagnosis at this time, or else one is apt to be placed in the position of some of our renowned judges, who, on

occasion, are forced into reversing their decisions.

There is nothing to be gained by taking the patient's blood for a Wassermann test within the first two weeks after the appearance of the sore, as almost invariably the blood at this time is found to be negative.

It is not thought that any physician is justified in giving antisyphilitic treatment until the diagnosis is established or confirmed by laboratory methods. There are several reasons why treatment should be withheld until this is done. In the first place, we can not be sure we are dealing with syphilis, and anti-luetic treatment prevents a positive diagnosis being made from the blood later on. In the second place, the patient himself, after the disappearance of the sore and other objective symptoms, doubts that he really had it. The result is, he usually goes to another physician for verification of the diagnosis, and the second one consulted informs him, from the lack of clinical symptoms, or from a negative report on the blood taken at this time, that he does not, and probably did not have it. The consequence is that physician number one not only loses a patient, but also makes an enemy, as it is only natural for the patient to think that the physician told him he had syphilis in order to get a fee for treatment. Under such circumstances, unless he has laboratory reports to substantiate his diagnosis, he is placed in an embarrassing predicament. The most unfortunate thing about such an occurrence is, that if the patient really had syphilis, he will not receive an adequate amount of treatment, due to the disagreement in diagnosis.

Conceding we are dealing with primary syphilis, how shall we treat it? The sore, or chancre, does not require local treatment, unless a mixed infection is present, as it rapidly disappears under anti-syphilitic treatment. Intensive treatment should be instituted as soon as the diagnosis is verified. Naturally, following intensive treatment, a strongly positive blood will shortly become negative, but these negative reports only signify that the patient is responding to treatment. We are in no wise deceived by such reports during the first year, or eighteen months, into believing that we have eradicated the infection and that the patient is cured. We know if treatment be discontinued for a sufficient length of time, the vast majority will again give positive tests. How then are we to really know

when a patient is free from all infection, and how long should treatment be continued? No one can give a definite answer to these questions since each patient is a law unto himself. No two have the same resistance to any disease, nor react alike to any form of treatment. What may be adequate to effect a cure for one, may be entirely inadequate for another. I believe, however, the more one sees of this disease, and studies its remote effects, the more he will be inclined to treat it over a long period of time. My personal opinion is, a patient should be kept under observation and intermittent treatment for fully three years.

Before pronouncing a patient cured, I should want to know the blood was negative on examinations, made at intervals six months apart, for at least two years, following treatment extending over a period of three years. In addition, I should want to be assured the cerebro-spinal fluid was also negative, since it is not uncommon to find in patients with old luetic infections, the blood is negative and the spinal fluid strongly positive.

The form and dosage of the salvarsan, as well as the mercury, is a matter of individual preference with the physician having charge of the case. Formerly, I was accustomed to give the insoluble salts of mercury, such as the grey oil, calomel in suspension, or the salicylate by deep injection into the gluteal region. I have, however, discontinued the intro-muscular injection on account of the pain associated with its introduction, and also because of the occurrence of nodosities following its use. Such nodes are produced by inflammatory exudation around the deposits of mercury, and while most of them undergo resolution within the course of a few weeks, there are some which do not, and these remain indefinitely, unless they undergo necrotic liquefaction, or abscess formation. For these reasons, I prefer to use the soluble salts of mercury, intravenously. When it is given this way, one knows that it is all taken up by the circulating blood and that the patient receives the full therapeutic benefit from it, even though it be more quickly eliminated than by other modes of administration. It causes no pain and there is no reaction associated with its introduction.

Inunctions are filthy, and at best, this form of administration is a poor one, since the skin is excretory in its function rather than having absorbable power, and besides, one has no way of

judging how much of the mercury is really taken up.

Mercury by mouth is apt to cause gastric disturbances, as well as salivation, or ptyalism.

Mixed treatment in the early stages of syphilis is not founded upon a sound therapeutic basis, since the iodides have no spirochætacidal effect, and at this time, there are no gummatous changes taking place, and no encapsulation of the micro-organisms, necessitating liberation, which alone could justify the giving of the iodides along with the mercury.

There are two agents used in the treatment of syphilis which I desire to mention in passing. The first of these is bismuth. My experience with this drug as an anti-luetic agent is, to a certain extent, limited, but I believe it to be a valuable adjunct in the treatment of syphilis, and that it should be universally employed as a remedial measure. Its indication is apparent in that class of patients whose blood fails to respond serologically after persistent salvarsan and mercury medication. It is in the treatment of these so-called "Wassermann-fast" cases that we may expect to see its most brilliant results.

The second preparation is sulpharsphenamin. There seems to be an erroneous idea entertained by the profession as to the length of time this drug has been used as an anti-luetic agent. It would appear the current opinion is that this is comparatively a new remedy, but, of course, the truth is, both sulpharsphenamin and neoarsphenamin were discovered by Ehrlich, and the patents for both were taken out by him in 1912. He, however, realized the inferiority of the therapeutic value of sulpharsphenamin and advised the discontinuance of its use, in favor of neoarsphenamin. That it has a certain value was recognized by the Germans, but its use was limited by them chiefly to intramuscular injection in the treatment of children, whose small veins rendered intravenous medication difficult to administer, and to the very obese, whose veins were hard to locate.

Sulpharsphenamin was first manufactured and put on the American market by a certain chemical firm at Philadelphia, but this pioneer firm has always admitted that it was markedly inferior to neoarsphenamin. This view is held by other chemical firms manufacturing this preparation, with the exception of a certain one, whose name need not be mentioned. This particular firm has widely advertised sulpharsphenamin, claiming its

therapeutic value is as great, or greater, than other arsphenamin preparations. Those who advocate its use emphasize the fact it may be given either intramuscularly, or intravenously, and dwell upon its not causing induration and soreness, if given intravenously and infiltration takes place. It is conceded this is true, but this claim is one of doubtful virtue, since the only factor of interest in considering what arsenical preparation should be used is, the relative value of the preparation, as shown by subsequent Wassermann tests on the blood following its use.

I recently had occasion to write Dr. H. H. Hazen, professor of Dermatology, at Georgetown University School of Medicine, at Washington, relative to his experience with this drug. His reply is as follows: "My own clinical experience with sulpharsphenamin, covering over five hundred injections, proved the drug to be markedly toxic, having no more effect upon a pathological spinal fluid than has neo, and is not particularly well borne either subcutaneously or intramuscularly, except in doses not exceeding 0.3 gram."

In an article entitled, "The Chemotherapy of Sulpharsphenamin," appearing in the Journal of the American Medical Association, November 29, 1924, by Raiziss, Severac and Moetsch, of Philadelphia, the following statement is made: "Taking the chemotherapeutic index as a criterion of therapeutic efficiency, sulpharsphenamin, based on trypanocidal tests, is considerably inferior to arsphenamin, and at most, one-half as efficient as neoarsphenamin." Assuming this is true and that sulpharsphenamin is only one-half as efficient as neoarsphenamin, then, if Ehrlich's statement made in 1909 is true, that inefficient doses of the arsenical preparations have a tendency to produce an acquired resistance of arsenic-fast trypanosomes, its use is contraindicated. Reasoning from the results of Ehrlich's experiments on the cultivation of arsphenamin-fast trypanosomes, it is not improbable that arsphenamin-fast strains of the spirochæta pallida may be produced by the same means. I am aware that many syphilologists contend there can be no such thing as arsenic-fast strains of spirochæta pallida, on account of the spirillicidal power of the drug. Akatsu and Noguchi, however, have produced an arsenic-fast strain of treponema pallidum, by exposing cultures of the organism to gradually increased concentrations of the drug. This acquired resist-

ance was not constant, being lost after several transfers through non-medicated media.

The findings of Raiziss, Severac and Moetsch are in accordance with the work of Corbitt and Meyers, of New York. In a paper read before the Scientific Section of the American Pharmaceutical Association at Asheville, North Carolina, in September, 1923, they showed by a table of experiments conducted by themselves, that sulpharsphenamin was two and one-half times less efficient than neoarsphenamin.

If these statements are correct concerning the trypanocidal properties of these respective arsenical preparations, and if we also accept the consensus of opinion of scientific investigators, that the trypanocidal test is an accurate indication of the curative power of the arsphenamin group in the treatment of syphilis, then we must admit sulpharsphenamin is an inferior drug, and should be replaced by those preparations having greater efficiency, in order to avoid the possibility of drug-resistance.

As to the treatment of syphilis of the central nervous system, or cerebro-spinal syphilis, paresis may be quickly disposed of. Until 1917, it was considered an incurable disease and no known treatment had the slightest effect upon its course. With, or without treatment, there were periods when to all appearances the patient's condition was seemingly improved, but without exception, all progressed to a fatal termination. In the year mentioned, Professor von Jauregg, of Vienna, acting upon the assumption that severe infection exerts a beneficial influence on paresis, inoculated his patients with malaria. It is stated this method of treating the disease has resulted in restoring a certain number of paretics to an earning capacity.

Tabes dorsalis, or locomotor ataxia may yield to intraspinal treatment. This is known as the Swift-Ellis method of treatment, and consists of the injection of salvarsanized serum of the blood directly into the spinal canal. Severe reactions sometimes follow this form of treatment, but I have never yet seen a death result from its use.

In closing, I desire to state that syphilis should not be treated in a routine manner, and no rule governing dosage, intervals between injections, periods of rest, or length of treatment should be strictly adhered to. One should be influenced by the individual clinical and serological findings of each case, and should outline his treatment

(Continued on page 154)

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NINETEENTH DISTRICT—M. L. CRUM, M.D. Arcadia
DeSoto, Hardee, Highlands.
TWENTIETH DISTRICT—J. Y. PORTER, JR., M.D. Key West
Monroe.
TWENTY-FIRST DISTRICT—H. C. McDERMID, M.D., Okeechobee
St. Lucie, Okeechobee, Indian River, Martin.

WOMAN'S AUXILIARY

MRS. WILBURN LASSITER, PRESIDENT Gainesville
MRS. A. H. FREEMAN, VICE-PRESIDENT Ocala
MRS. M. M. HANNUM, RECORDING SEC'Y.-TREAS. Eustis
MRS. G. C. TILLMAN, CORRESPONDING SEC'Y. Gainesville
MRS. WM. J. BUCK, STATE PRESS CHAIRMAN West Palm Beach

RECENT MEDICAL LEGISLATION.

The Legislature of 1927 has been the subject of much criticism for some of the laws which it passed, but the medical profession has every reason to be gratified for the very constructive medical legislation produced by this session; in fact, all of the bills which were endorsed by the Medical Conference consisting of the officers of the Florida Medical Association, the members of the State Board of Health and the members of the State Board of Medical Examiners, were passed without opposition. This will do more toward curbing medical quackery and eliminating fraudulent practice in this state than anything that has happened for a long time.

The State laws are so improved that now the Board of Medical Examiners can handle in our State courts such fraudulent practitioners as have recently been in the public eye and stood

trial in the Federal courts at Tampa. Up to this time we have had no adequate State laws to cover their particular offenses.

The medical registration law requires annual registration with the State Board of Health of all practitioners of every healing art, and in making this registration each individual gives such information about himself as will assist the authorities in keeping track of his qualifications and of the type of work that he is doing. At present there is no authentic list in this State of the practicing physicians, or practitioners of other cults.

There are many irregular schools of practice, the majority of whose followers have a certain degree of honesty and who would like to see the elimination of those in their cult who have not qualified themselves to practice.

Senate Bill No. 77, which was a series of amendments to the Medical Practice Act of 1921 and which passed without opposition, abolished in this State the reciprocity of license with other states. While this has not been in practice by the Board, it has been permitted by the law, and on many occasions has brought about trouble in the Board of Medical Examiners.

The Board of Medical Examiners, under the law, will have authority for revoking a medical license on the following grounds:

(a) That the physician is guilty of fraud in the practice of medicine, or fraud or deceit in his admission to the practice of medicine.

(b) That a physician has been convicted in a court of competent jurisdiction of a felony. The conviction of a felony shall be the conviction of any offense which if committed within the State of Florida, would constitute a felony under the laws thereof.

(c) That a physician is engaged in the practice of medicine under a false or assumed name, or the impersonation of another practitioner of a like or different name.

(d) That a physician is addicted to the habitual use of intoxicating liquors, narcotics or stimulants to such an extent as to incapacitate him for the performance of his professional duties.

(e) That a physician is guilty of untrue, fraudulent, misleading or deceptive advertising; or advertising that he can cure or treat diseases by any secret method, procedure, treatment or medicine, or that he can cure a manifestly incurable disease.

(f) The obtaining of a fee on representation that a manifestly incurable disease can be permanently cured.

(g) Causing the publication or circulation of an advertisement of any medicine by means whereby the monthly periods of women can be regulated, or the menses, if suppressed can be established.

(h) Causing the publication or circulation of a fraudulent advertisement relative to any disease of the sexual organs.

(i) The procuring of aiding or abetting in procuring a criminal abortion.

The causes for prosecution and conviction of a physician are well defined in the law and are given as follows:

ANY PERSON WHO SHALL

(a) Sell, or fraudulently obtain or furnish any medical diploma, license record or registrations, or aid or abet in the same, or

(b) Practice medicine under cover of any diploma, license, record or registration illegally or fraudulently obtained or secured, or issued unlawfully or on fraudulent representation; or

(c) Advertise to practice medicine under a name other than his own or under an assumed name; or

(d) Falsely impersonate another practitioner of a like or different name, and

Any person who not being then lawfully licensed and authorized to practice medicine in this State, shall

(a) Practice or advertise to practice medicine.

(b) Use in connection with his name any designation tending to imply or designate him as a practitioner of medicine; and

(c) Use the title "Doctor," or any abbreviation thereof in connection with his name, or with any trade name in the conduct of any occupation or profession, involving or pertaining to the Public Health, or the diagnosis or treatment of any human disease, pain, injury, deformity or physical condition unless duly licensed by a board created under the laws of the State of Florida; and

(d) Any person who during the time his license to practice medicine shall be suspended or revoked, shall practice medicine.

Shall upon conviction be fined not more than one thousand (\$1,000.00) dollars, or by imprisonment for not more than five (5) years, or by both such fine and imprisonment, in the discretion of the court.

The Florida Medical Association accomplished in the passage of these laws something that we have struggled for, for years, and this marks a great step in the advancement of medicine and culture in this state. It also denotes the fact that the Florida Medical Association is known to sponsor laws which are not selfish in purpose, but are designed for the good of society as a whole.

We should continue to struggle for further improvements, and the next thing to look forward to and to ask of the lawmakers is a requirement of knowledge of the basic sciences before one can apply to any of the authorized Boards for license to practice any healing art.

H. MASON SMITH.

NEWS ITEMS

Dr. John W. Simmons, Miami, president of the Florida Medical Association, was a recent visitor to Jacksonville while en route with Mrs. Simmons to New York where they expect to spend their vacation.

* * *

Dr. Wm. J. Calvin, of Eustis, drove to Jacksonville to attend the Kiwanis meeting August 17th.

* * *

Dr. John W. Carter, of Pensacola, recently received a certificate of the American Board of Otolaryngology.

* * *

Dr. A. J. Bertram, of Hollywood, spent three months of the past summer attending the summer courses of the American Medical Association at Vienna, Austria.

* * *

Dr. Samuel Aronovitz, of Miami, has recently returned from a several weeks' stay in New York where he attended clinics.

* * *

The Jackson County Medical Society met at the Chipola Hotel, Marianna, August 9th. After a delightful dinner had been served, a paper was read by Dr. C. H. Harrison, of Cottondale, on "Typhus Fever."

* * *

Dr. S. C. Wood was recently appointed city health officer of Leesburg.

* * *

Dr. M. M. Harrison, of Palmetto, recently underwent an operation for appendicitis and is now convalescing.

Dr. and Mrs. M. A. Lischkoff, of Pensacola, expect to spend a month in Chicago and Detroit.

* * *

Dr. R. F. McLeod, recently of Orlando, expects to open offices at Greenwood during this month.

* * *

Dr. J. Q. Folmar, of Chattahoochee, has recently been appointed by Governor John W. Martin as superintendent of the State Hospital for Insane.

* * *

Dr. E. H. Teeter, of Jacksonville, was recently elected post vice-commander of the Edward C. DeSaussure post of the American Legion.

* * *

The city commissioners of Stuart recently called a bond election for September 16th on the proposed issue of \$30,000 bonds for the construction of a city hospital.

* * *

Dr. and Mrs. Edward Conradi, Tallahassee, have recently announced the engagement of their daughter, Miss Elizabeth, to Dr. J. Lunsford Boone, of Jacksonville.

* * *

Dr. and Mrs. Herman Harris are now in New York. They expect to sail shortly for France to attend the American Legion Convention.

* * *

Dr. C. D. Wilder, of Daytona Beach, has moved to Orlando, where he has taken offices in the Rose Building.

* * *

Dr. Hiram Byrd, formerly of Bradenton, announces the opening of his office in Suite 310, Citrus Exchange Building, Tampa. Practice limited to eye, ear, nose and throat.

* * *

Dr. Davis Forster of New Smyrna is doing special work in obstetrics in Detroit, Buffalo and Chicago.

* * *

The Pasco-Hernando-Citrus County Medical Society held its August meeting at the home of Dr. H. R. Creekmore in Brooksville. Following the scientific and business meeting, dinner was served. Those who attended were: Dr. V. H. Guinn, Jacksonville, guest; Drs. T. F. Jackson and J. T. Bradshaw, Dade City; George Dame and J. F. Miller, Inverness; W. H. Cox, W. S. Hancock and G. R. Creekmore, Brooksville.

Dr. G. C. Tillman, of Gainesville, accompanied by Mrs. Tillman and daughter, sailed July 30th for New York for a month's tour of the New England states. Dr. Tillman will also visit the clinics in New York and Boston during his absence. They expect to return in September.

* * *

Dr. O. C. Brown, of Ft. Lauderdale, is doing post graduate work in the eye department of the Chicago Post Graduate School.

* * *

Dr. T. H. Bates, of Lake City, spent two weeks in August at Fort Oglethorpe, Georgia, on active duty with the 307th Medical Regiment of the U. S. Army. Dr. Bates is a captain in the Reserve Corps and is assigned to the medical detachment of the 328th infantry, Florida's reserve regiment.

* * *

Dr. Elbert McLaury, of Hollywood, is doing post graduate work in pediatrics at the Cincinnati General Hospital, Cincinnati.

* * *

Dr. and Mrs. E. R. Marshburn, of Raiford, expect to make their residence in Marianna after this month.

* * *

Dr. Samuel D. W. Light, of Miami, spent the month of August at his summer home in Hendersonville, N. C.

Dr. and Mrs. R. E. Respass, of Ft. Lauderdale, are spending their vacation in Indiana.

* * *

The Adams Hospital has recently been incorporated under the name of the Panama City Hospital, Inc. This is a non-profit institution, there being eleven beds. It is under the supervision of the Bay County Medical Society.

* * *

Dr. H. A. Barge, of Miami, has returned from an extensive trip through the west, where he attended clinics at Rochester, Denver and St. Louis.

* * *

A staff organization for the DeLand Memorial Hospital has recently been perfected. All practicing physicians in DeLand, who are members of the Volusia County Medical Society, are included in the staff. Dr. A. S. Munson is chairman of the staff and Dr. L. W. Glatzau, secretary and treasurer.

* * *

Dr. James H. Dyer and family have returned to Lake City from a vacation spent at their old home in Wartrace, Tenn., and with relatives in northern Mississippi.

* * *

Dr. F. A. Vogt, of Miami, recently spent several weeks in Atlanta.

(News Items continued on page 144)

The Tulane University of Louisiana - GRADUATE SCHOOL OF MEDICINE

Approved by the Council on Medical Education of the A. M. A.

Postgraduate instruction offered in all branches of medicine. Courses leading to a higher degree have also been instituted. A bulletin furnishing detailed information may be obtained upon application to the Dean, 1551 Canal Street, New Orleans, La.

IMPORTANT NOTICE

The Brown Lermond Surgical Company, Miami, has sold its entire stock and fixtures to the undersigned who have completely remodeled the store and greatly increased the stock.

Your patronage will be appreciated.

SURGICAL SUPPLY COMPANY

"Florida's Largest Surgical House"

JACKSONVILLE STORE:
34 West Duval Street,
Harry L. Parramore,
President and Gen. Mgr.

MIAMI STORE:
1152 N. E. Second Avenue,
Chas. A. Baumann,
Manager.

TAMPA STORE:
1544 Franklin Street,
T. Emmett Anderson,
Manager.



How MEAD'S Casec can be used in cases of Nutritional Disturbance in the Breast Fed Infant.

PROLONGING the duration of breast feeding in infancy is "a consummation devoutly to be wished." Many minor nutritional disturbances in breast-fed infants are often too willingly accepted by the mother as an excuse for the frequently heard remark, "My milk doesn't seem to agree with the baby."

Upon the appearance of loose, greenish stools in the breast fed, Mead's Casec will usually be found helpful in correcting the condition. In such cases it has been found by physicians that an ounce of the proper mixture of Casec and water, given before each breast feeding, will usually correct this disturbance in a short time.

Samples and Literature Sent on Request

THE MEAD POLICY

Mead's infant diet materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding is supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA

The American College of Surgeons will hold the seventeenth Clinical Congress in Detroit, October 3-7. Headquarters will be at the Book-Cadillac and Statler hotels, and the meetings will be held at the Statler Hotel and Orchestra Hall. The Hospital Standardization Conference will extend from Monday morning to Thursday afternoon and will include a discussion of hospital and nursing problems and hospital demonstrations. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, the inaugural address of the new president, and the John B. Murphy oration. Clinics in general surgery will be held in the Detroit hospitals each morning from Tuesday to Friday, and in eye, ear, nose and throat work the same afternoons. Clinics will also be held at University Hospital, Ann Arbor, Tuesday to Thursday. On Tuesday and Wednesday mornings and afternoons, and on Thursday morning, clinical demonstrations will be held at the Statler Hotel (mornings) and Orchestra Hall (afternoons). On Thursday afternoon the annual meeting of the governors and fellows will be followed by a cancer symposium. On Friday afternoon there will be a symposium on traumatic surgery, to be participated in by leaders in industry, labor, indemnity organizations, and the medical profession. On Tuesday evening the program will take the form of a celebration of the Lister Centennial. On Thursday evening there will be a large Community Health Meeting in the Masonic Temple, and on Friday evening the Annual Convocation of the College. Other outstanding features will be the exhibits. In addition to the commercial exhibits there will be a replica of the Lister exhibit at the Welcome Museum of Natural History, London, including Lister's operating rooms and hospital wards. The Department of Hospital Activities, of Literary Research, and of Clinical Research of the College will also present exhibits. Among the foreign guests will be Sir John Bland Sutton, England; J. M. Munro Kerr, Scotland; Gordon Craig, Australia; Gustaf E. Essen-Moller, Sweden; S. A. Gammeltoft, Denmark. The retiring president is W. W. Chipman, Montreal, and the president to be inaugurated, George David Stewart, New York. The Lister oration will be delivered by W. W. Keen, Philadelphia. The chairman of the Detroit Committee on Arrangements is Alexander W. Blain.

(News Items continued on page 146)

The practice of refraction advances

Edgar Tillyer has found the finest possible alternative for the impossible idea of attaching an artificial movable lens to the eyeball. He has completely eradicated all the inaccurate and disturbing physiological effects of ordinary eyeglass lenses, both for double and single vision.

The old idea of "allowances" in writing eyeglass prescriptions is obsolete. A new day for eyeglass wearers has dawned, when the "unseen blur" of an ordinary lens is gone, ruled out by volume after volume of complex mathematical computations upon which the new, practically custom-made, Tillyer lens, is ground. Each power in Tillyer lenses requires its own particular base; its own special tools—it can not be made by mass production methods.

Tillyer lenses will fill *in glass* the most accurate prescription you can put on paper—with the same high degree of accuracy. Specify TILLYER LENSES on every eyeglass lens prescription.

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TILLYER LENSES

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Sales Branches and Rx Shops at

Jacksonville, Miami, Orlando, Pensacola and
Tampa, Florida.

Clip today—and mail

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When Supplemental Bottle Feeding Is Required

Doctors, nurses, hospitals have found in Babygain the ideal food for infant feeding.

A complete modified milk powder, practically identical with mother's milk in chemical and characteristic formula, requiring only the addition of the proper amount of water to provide pure, modified milk, fresh for every feeding.

Babygain is made from pure, fresh milk produced under strict sanitary conditions, powdered and modified in our modern laboratories a few hours after milking.

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Dr. and Mrs. T. G. Croft, of Jacksonville, recently returned from a several weeks' trip in the North Carolina mountains.

* * *

Dr. S. R. Norris, of Jacksonville, has recently returned from several weeks' vacation spent in the North Carolina mountains.

* * *

Dr. Leigh F. Robinson, of Ft. Lauderdale, addressed the Florida East Coast Dental Society on "The Relation of Dental Infection to Systemic Diseases" at their regular meeting held in Ft. Lauderdale, July 28th.

* * *

Dr. A. S. Hawkins, of Clermont, will spend several months in Muskogee, Oklahoma, where it has been necessary to bring Mrs. Hawkins for her health.

RESOLUTION ADOPTED BY BROWARD COUNTY MEDICAL SOCIETY

WHEREAS, on July 9, 1927, the Broward County Medical Society lost one of its dearest members in the death of Dr. J. O. Stranahan, and

WHEREAS, Dr. Stranahan was a loyal member of his profession, conscientious in his service to his patients and charitable to the poor, and

WHEREAS, his presence will be greatly missed by his professional associates and fellow members of this society, be it

Resolved, That the members of the Broward County Medical Society express their grief in the loss of Dr. Stranahan and sympathy for his family. That a copy of these resolutions be attached to the minutes of this society, one sent to the bereaved family and one to the Journal of the Florida Medical Association.

July 12th, 1927.

The newspaper report regarding the appointment of Dr. F. P. Herman, of West Palm Beach, as a member of the State Board of Medical Examiners was erroneous. The statement was corrected later in the newspaper. As yet, no definite appointment has been made.

* * *

Dr. and Mrs. C. M. Sandusky, of Jacksonville, are spending several weeks in Canada.

* * *

Dr. J. D. Love, of Jacksonville, who is a member of the faculty of the Southern Pediatric
(News Items continued on page 148)

As a General Antiseptic

IN PLACE OF
TINCTURE OF IODINE

Try
MERCUROCHROME—220 SOLUBLE

(Dibrom-Oxymercuri-Fluorescein)
2% SOLUTION

It stains, it penetrates and it furnishes a deposit of the germicidal agent in the desired field.

It does not burn, irritate or injure tissue in any way.

Hynson, Westcott & Dunning
BALTIMORE, MD.

Brook Haven Manor

(Dr. Owenshy's Sanatorium)

Convalescent, Tired, or Rundown People and those Medical Cases which present prominent Nervous Elements find **BROOK HAVEN MANOR** a HAVEN OF HEALTH.

BROOK HAVEN MANOR stands for all that is best in the Care and Treatment of these patients and the correction of Maladjustments, Faulty Habits of Thinking, Personality and Behavioristic Disorders. The atmosphere of a large country home is studiously maintained.

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then try it on the
healthiest baby....

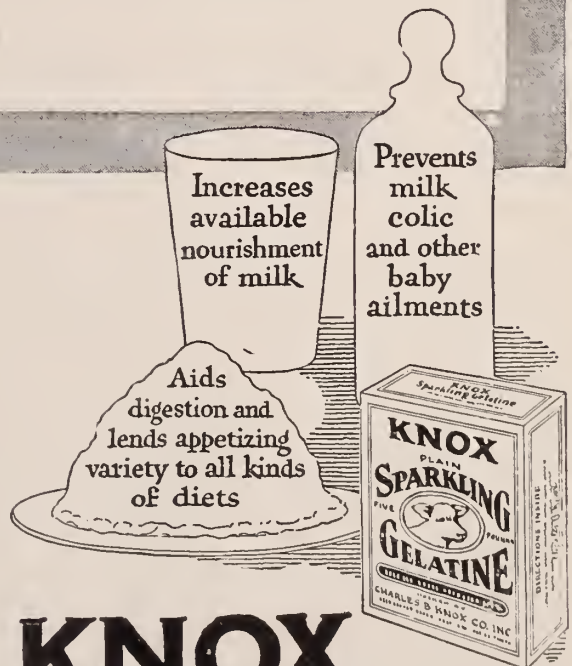
REGARDLESS of the irrefutable results in laboratory work—regardless of the thousands of experiences of physicians everywhere—we realize that you cannot accept a new treatment until you yourself have proved its value. May we, therefore, ask permission to send you the full reports of what has been accomplished by adding Knox Sparkling Gelatine-to-milk in the baby's formula? Not only does its protective colloidal action modify the curds which often cause digestion disturbances, but it also increases the available nourishment of the milk and helps the child quickly to attain and maintain normal weight.

The method is as follows:

Soak, for about ten minutes, one level tablespoonful of Knox Sparkling Gelatine in one-half cup of milk taken from the baby's formula; cover while soaking; then place the cup in boiling water, stirring until gelatine is fully dissolved; add this dissolved gelatine to the quart of cold milk or regular formula.

May we send you reports and scientific data?

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"The Highest Quality for Health"

From raw material to finished product Knox Sparkling Gelatine is constantly under chemical and bacteriological control, and is never touched by hand while in process of manufacture.

Seminar, has recently returned from Saluda, North Carolina, where the Seminar has been in session. He reports the most successful term since the Seminar has been in existence, an attendance of ninety-seven physicians being recorded. Of that number, there were seventeen physicians from Florida in attendance. The student body is enthusiastic over the course they are receiving and judging from the growth of the Seminar, it is destined to be a prominent institution in the south. Members of the Florida Medical Association who attended the Seminar were: Drs. W. E. Sherman, Winter Haven; L. H. Paul, Bonifay; R. D. Sistrunk, Dade City; Walter C. Page, Cocoa; J. L. Chalker, Ocala; N. L. Gachet, Century; I. F. Bean, Melbourne; C. H. Kirkpatrick, Arcadia; J. S. Coker, Limestone; Joseph F. Ruff, Clearwater; Robert C. Black, Plant City; J. B. Brinson, Jr., Monticello; G. C. Overstreet, Lakeland; J. P. Tomlinson, Lake Wales, and C. L. Kennon, Miami.

* * *

Dr. Henry Hanson, Director of The Florida State Board of Health Laboratories from 1909 to 1917, has recently returned to his home in Sioux City, Iowa, from two years of service with the International Health Board in Nigeria, West Africa, where he has been engaged in scientific research work studying yellow fever in cooperation with the British Government. Enroute to the United States he passed through France, Germany, Norway and Sweden. Upon leaving Florida in 1917, Dr. Hanson was enrolled in the United States Army and ordered to the Canal Zone, where he served as Chief Sanitary officer. At the close of the war he was made health officer (Dirreccion de Salubridad) of Peru, where he dealt with plague, smallpox, typhoid and yellow fever and suffered from an attack of the last himself. In 1924 he did similar work in Salvador, Central America, and later he went to Venezuela to make a health survey. After returning from Central America and before accepting his position with the International Health Board, Dr. Hanson conducted a private laboratory in Jacksonville. Since the death of Mrs. Hanson in 1923, the children have been at the family home in Sioux City.

* * *

Dr. and Mrs. R. B. Harkness, who have been motoring for two or three weeks in the Carolinas and Georgia, have just returned to Lake City.

(News Items continued on page 150)

The New Horlick's Maltose and Dextrin Milk Modifier

has been accepted by the
Council on Pharmacy and
Chemistry of the American
Medical Association.

Contains proteins, carbohydrates
and mineral salts of value in the
infant's diet, and modifies the
casein of the milk, rendering it
readily assimilable.

For use as a milk modifier, only
on prescription by physicians.

Samples prepaid on request to

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The HANDARK.

The New Betzco
CARBON - ARC.

Ultra-Violet Lamp

Price Complete \$27.50



Only \$27.50 for this portable carbon-arc ultra-violet lamp! Spectograms indicate an ultra-violet radiation down to 2200 angstrom units. Carbons are 6 in. long and 6 mm. in diameter and consume 8 amperes of current at 45 volts. For use on any 110 volt a.c. or d.c. For local, short range treatments lamp will meet your requirements in every way. Try it for 30 days!

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Send me on 30 days free trial the 634 So. Wabash Ave.
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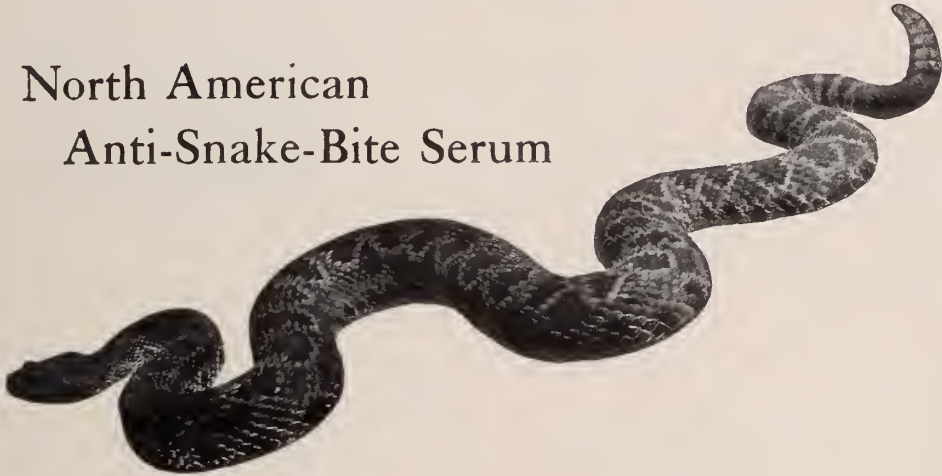
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ANTIVENIN

(NEARCTIC CROTALIDAE)

North American
Anti-Snake-Bite Serum



ANOTHER "MULFORD FIRST", and by no means the least important of the achievements of the Mulford Laboratories, was recorded when the U. S. Government issued to the H. K. Mulford Company the first license ever granted in this country for the manufacture and interstate sale of ANTIVENIN (Nearctic Crotalidae).

This product is a concentrated anti-snake-bite serum, developed by Dr. Afranio do Amaral, of Brazil, Director of the Antivenin Institute of America. It is polyvalent against the venoms of the rattlesnakes, copperhead and moccasin—snakes of the family Crotalidae in North America.

Supplied in 10 cc syringes, with sterile, glass-incased needle, ready for immediate use. Carries a five-year date of expiration and is not returnable or exchangeable.



DOSE.—10 cc administered subcutaneously, as soon as possible after infliction of the bite, but necessarily within 12 to 24 hours.

Literature on Request

H. K. MULFORD COMPANY

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THE PIONEER BIOLOGICAL LABORATORIES

Dr. Clayton Washburn and family have just returned from a three weeks' vacation trip to Susquehanna, Pennsylvania, New York City and other points of interest. Their daughter Janet will return to Tallahassee to attend the Florida State College for Women. Ruth, the younger daughter, who graduated from the Jacksonville high school last year, did not return to Jacksonville as she will attend Oberlin college this fall.

* * *

Dr. N. L. Spengler, of Tampa, left for a tour with the Appalachian Highway Association on September 1st. The tour is arranged so as to go over the Appalachian Scenic Highway from Atlanta, Georgia, to Montreal, Canada, and Dr. Spengler is representing the city of Tampa, joining the motorcade in Atlanta on September 4th. After reaching Montreal, Dr. Spengler is going to take a course of study in the University of Montreal and will return to Tampa about the middle of October.

* * *

Dr. F. K. Herpel, of West Palm Beach, expects to attend the meeting of the American Roentgen Ray Society at Montreal, September 20th to 23rd. Later he expects to visit prominent X-ray laboratories in New York, Philadelphia, Baltimore and Washington, returning to West Palm Beach about November 1st.

* * *

Governor John W. Martin recently announced the appointment of Dr. N. A. Baltzell, of Marianna, as a member of the State Board of Medical Examiners to succeed himself.

* * *

At a meeting of the Palm Beach County Medical Society, on August 8th, Dr. W. A. Oughterson read a paper on "Cardiac Decompensation."

* * *

Dr. W. C. Williams, Jr., of Delray, has recently returned from Rochester, Minn., where he spent three weeks in the Mayo clinic.

* * *

Work is progressing rapidly on the new Saint Vincent's Hospital in Jacksonville. Ideally located in Riverside, facing the beautiful St. Johns river, this two hundred bed hospital, when completed, will be one of the largest and best equipped in the state. It is planned to be completed in February, 1928.

* * *

Dr. J. H. Pierpont, of Pensacola, recently returned from a vacation at Asheville, North Carolina.

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tered**STORM**Trade-
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Regis-
tered**Binder and Abdominal Supporter**

(Patented)

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tered**For Men, Women and Children**

**For Ptosis, Hernia, Pregnancy, Obesity,
Relaxed Sacro-Iliac Articulations, Floating
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Excessive Armpit Perspiration

Physician's samples
sent without cost
or obligation.

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samples to:**

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Large Hospitals are using the new laxative



The "Roche" laxative is different from every other

IT is only a year since diacetyl-dioxyphenyl-isatin (Isacen) was admitted into "New and Non-Official Remedies" and subsequently announced to the profession. Now this new substance is the routine laxative in several of the largest hospitals in the country, as well as in a large number of smaller ones. The hospital demand for Isacen has led us to put it up in special bulk quantities (1000 tablets) only available to hospitals. Even small institutions are ordering it now in 1000 tablet lots.

Why hospitals use ISACEN

The unique properties of this new substance peculiarly commend it to hospital use.

ISACEN is:

- 1.—**Non-absorbable:** cannot injure kidneys or liver, even in cases where impairment of these organs actually exists; it is eliminated entirely through the intestines; not a trace of it can be found in the urine; stimulates peristalsis even though it is not absorbed.
- 2.—**Non-toxic:** even in dosage far beyond the therapeutic requirements; cannot cause rash.

Isacen is, therefore, safe, which is shown by the fact that it can be given during pregnancy and lactation without any harmful effect upon mother or child.

- 3.—**Inactive in the stomach:** passes through the stomach unchanged; becomes active only upon reaching the intestine where alkaline juices split it up chemically.
- 4.—**Effective in small dosage:** just $\frac{1}{13}$ gr. (1 tablet) produces a smooth laxative effect in average cases; no contra-indications.
- 5.—**Easy to administer:** the tablets are exceptionally small, odorless and tasteless.

Do not the same reasons which make Isacen so suited to hospital adoption commend it to prescription use in general practice? Whenever a remedy for bowel regulation is indicated, consider the advantages of ISACEN. Remember, your patient, if you do prescribe it, is guarded against kidney, liver and stomach irritations.

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Parke, Davis & Company offer a 24-page illustrated booklet, "Rabies Vaccine (Cumming)," to any physician on request.

Horlick's Milk Modifier, a new product made by the Horlick's Malted Milk Corporation, Racine, Wisconsin, is now being introduced to the medical profession. This maltose and dextrin product, which is derived exclusively from malted grains, was first announced at the annual meeting of the American Medical Association in Washington, D. C., in June, and

(Continued on page 154)



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created much interest. Since that time it has been presented to convention gatherings in other parts of the country, and the Horlick representatives are now calling on individual members of the profession.

Horlick's Milk Modifier is presented and supplied to the profession along ethical lines. No feeding directions accompany the package. A statement on the wrapper is to the effect that the product is for prescription by physicians only.

In conformity with the Horlick policy, the Milk Modifier is put up in hermetically sealed glass jars only. The one-pound size retails at 75 cents, and the five-pound jar at \$3.00. The fact that it carries the name "Horlick's" is a guarantee that only the finest materials are used.

In the June 18th issue of the *Journal of the American Medical Association*, under the heading of New and Non-official Remedies the acceptance of the Horlick Milk Modifier was announced by the American Medical Association. The product differs from the malt sugars in that it incorporates soluble and readily assimilable protein and valuable mineral salts from the grains. The Horlick firm points out this fact as a decided advantage for its product.

Another point which is mentioned as an advantage in favor of the new product is the proportion of its two chief carbohydrates, maltose and dextrin, which are 63% maltose and 19.5% dextrin.

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Samples of the new product, literature concerning its use, prescription blanks and file cards giving methods of preparation are available for members of the medical profession and will be sent upon request.

(Continued from page 138)

accordingly. Of all patients, the syphilitic is the most undesirable to treat. It matters not how intelligent such a patient may be, it is practically impossible to impress upon him, or her, the importance of continuing treatment for a long period of time, after the disappearance of all objective and subjective symptoms. The larger percentage discontinue treatment after a few months, believing there is no necessity for further continuance, with the result that ten, twenty, or thirty years later, paralysis or insanity develops, in a considerable number of cases.

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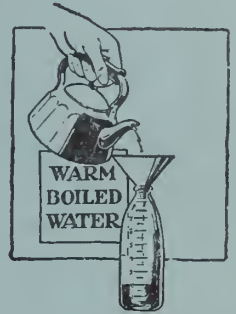


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THE JOURNAL

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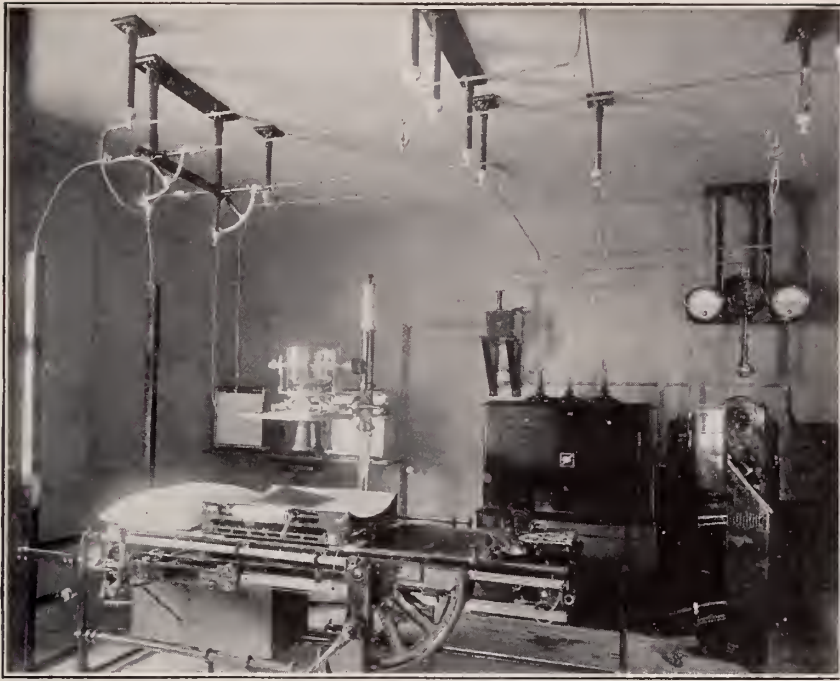
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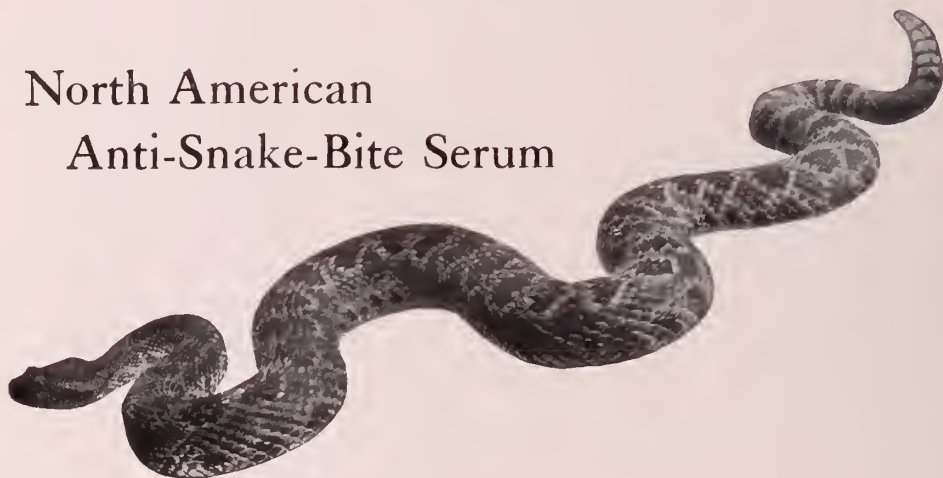
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that the lactose of cow's milk is the same as that of human milk."—John Lovett Morse, A.M., M.D., Professor of Pediatrics, Harvard Medical School, "CLINICAL PEDIATRICS," 1926.

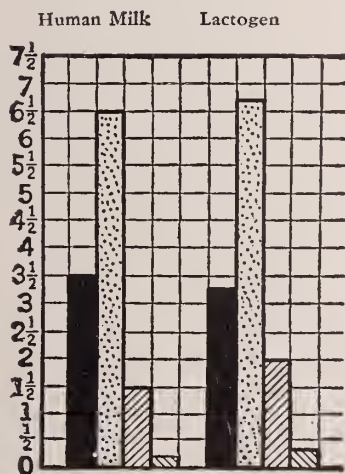
"Cane sugar, because of its sweetening power, has played an important role in the ordinary feeding of infants, even before the science of pediatrics was established upon a scientific basis. In younger infants, it is better to avoid it and to substitute milk sugar because of the readiness with which cane sugar ferments."—Text-book of "PEDIATRICS" by Professor E. Feer, translated by J. B. Sedgwick, Professor of Pediatrics, University of Minnesota, Page 61.

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—DR. HOLT, Page 178.

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SURGERY OF THE MALE PERINEUM*

A. R. KNAUF, M.D.,
Tampa.

Before the advent of urology as a specialty, most of the surgery of the urinary tract was done by general surgeons. Naturally they deviated as little as possible from the regions of the body with which they were familiar. The almost total use of suprapubic methods of diverting the urine in obstructive lesions of the lower urinary tract is an example of their influence. The male perineum remained for them largely an unexplored field. Still it is here that the ability of the urologist has made itself most apparent.

Interest in the study of the male perineum has been stimulated by the embryological studies of Lowsley, and of Wesson, by the glowing reports on perineal prostatectomy by Young, Hinman and Davis, and also by the work of Fuller and Cunningham on seminal vesiculectomy and seminal vesiculotomy. The progress has been so rapid in the past few years that a knowledge of this region has become essential to the proper practice of urology.

Cystotomy is a very imperfect method of diverting the urine. Usually only the larger portion is passed through the suprapubic drainage tube, the smaller portion still passing through the urethra. The effect of this in patients with urinary extravasations, or in those on whom some plastic work on the urethra has been attempted is very distressing. In the former case recurring extravasations are apt to take place. I have seen three distinct extravasations in the same patient following a cystotomy for a ruptured urethra. In the plastic cases the passage of urine will cause an infection of the wound with lack of union. It is in these cases therefore that dependent drainage through an external urethrotomy wound is indicated. The other type requiring urethrotomy are certain cases of urethral stricture—either the stricture is impassable or it is associated with certain complications such as periurethral abscess, a fistula, or

patients in whom dilatation is always accompanied by chills and fever, or by severe hemorrhage.

The operation of external urethrotomy should always be done under vision and with proper exposure. When a sound or a filiform can be passed into the bladder, it facilitates the procedure very much. If this cannot be done, the urethra should be incised just anterior to the stricture and the opening in it searched for. If, as occasionally happens, it cannot be found, it is best to locate the urethra at the apex of the prostate, and then, passing a sound retrograde bring the ends of the urethra in as close apposition as possible, tying a catheter in place. It is surprising how large a gap in the urethra can be bridged in this manner. We have recently had a patient in whom, due to previous extravasations, and the injudicious use of sounds, there remained a gap of fully one inch of the urethra which could not be identified. This was bridged by an indwelling catheter with a perfect result. Plastic operations, such as advocated by McGowan for the treatment of these cases, I believe unnecessary. If the ends of the urethra are brought in as close apposition as possible so that a sound can be passed into the bladder and all excess of scar tissue has been excised, we may look forward to a successful result. About the only severe complications which sometimes occur is post-operative hemorrhage. This is more likely in the cases of urinary extravasation in which operation has been delayed and is due to sloughing of the tissues. Control of the bleeding by ligature may be impossible and packing must be resorted to.

Perhaps the subject which in the past has caused more controversy than any other in urology is the relative value of suprapubic and perineal prostatectomy. While I do not advocate perineal prostatectomy as a routine, still there are certain advantages which make a familiarity with this procedure of the utmost importance. Perhaps the greatest of these is that it makes of prostatectomy an operation under direct vision and brings all the structures into easy accessibility. The advantage of this in the

*Read before the 54th Annual Meeting of the Florida Medical Association, West Palm Beach, April, 1927.

small fibrous prostates and in carcinomas is obvious. The line of cleavage in some of these small prostates may be so poorly defined and the lobes so adherent to the surrounding structures that enucleation is fraught with considerable difficulty. This is especially true in the two stage prostatectomy in patients with little intravesical enlargement.

Perineal prostatectomy is the treatment of choice in carcinomas of the prostate giving severe urinary symptoms or having a large residual urine. The result of radium either in the reduction of the amount of residual or in the palliation of symptoms has been quite disappointing. The duration of life in these cases seems to depend largely on the maintenance of proper kidney function. Thus Bumpus has shown that at the Mayo Clinic the best results were obtained in those cases in which cystotomy was done. Perineal prostatectomy is not done with any hope of obtaining a cure, but only to reduce the residual urine and to obtain an added degree of comfort for these people which cannot very well be obtained while wearing a suprapubic drainage tube.

There are certain other advantages to the perineal route, such as the lessened degree of shock, a smoother convalescence, the absence of the painful bladder spasms so annoying following a suprapubic prostatectomy and the absence of any perivesical infection. The anaesthesia is also simplified by the fact that caudal with injection of the lateral sacral foramina will suffice in practically all cases—no abdominal infiltration being required.

The more general adoption of the perineal route has been hindered by certain technical difficulties. These are largely the fear of injury to the rectum and to the external sphincter of the bladder. There is no question but that the suprapubic is the simpler method, especially in patients in whom previous cystotomy has been done because of some complicating condition, or because of the long period of preparation required.

Another procedure which has passed through various stages of popularity is that of seminal vesiculectomy and seminal vesiculotomy. Bearing in mind the large number of patients subjected to injections of the seminal vesicles through the vas, I think I am safe in saying that only the apparent technical difficulties of this

operation has prevented its more common use. As a matter of fact, the technique is quite simple and the operation is singularly free from complications. There is practically no mortality. I have records of thirty-four vesiculectomy cases done by me or in conjunction with Doctor Morrissey for chronic seminal vesicle infections. Of these, two had a moderate amount of post-operative hemorrhage—one of which required repacking. In one the rectum was accidentally torn, resulting in a fistula which healed in fourteen days. Another—a case of tuberculosis—developed a sinus which had not healed after three months. There were no other complications of any moment.

There are, however, certain after-effects which should make us exercise great caution in the selection of these cases. Perhaps the most disconcerting of these is a loss of sexual power which follows removal in most of the cases.

The indications for this operation are very few. It may be done as a last resort in arthritis cases in which the vesicles are a focus of infection. Some brilliant results have been reported in these cases. Still the determination of a seminal vesicle as the sole, or at least chief, focus of infection offers a great deal of difficulty. Usually there is coexisting infection of the prostate, and this is somewhat difficult of removal. The lateral lobes can be partially enucleated and their attachments to the urethra cut, but the rest of the prostate is practically impossible of removal without opening the urethra. Rarely one encounters patients with a large tender vesicle, causing a great deal of pain. These cases had better be subjected to a vesiculectomy. Young has advocated seminal vesiculectomy with partial excision of the prostate in cases of genital tuberculosis. This is done on the assumption that genital tuberculosis is primary in the prostate and seminal vesicles. The value of this procedure in tuberculosis has not been sufficiently demonstrated to become popular. There are certain complications which are apt to occur, perhaps the most distressing of which is the accidental opening of the urethra which is likely to result in a permanent urethral fistula.

Vesiculectomy or drainage of seminal vesicles for chronic infections is a procedure which, I think, has very little to recommend it. When the indications are sufficient to warrant operation on the vesicles they should be removed.

Drainage of all the blind recesses in a diseased seminal vesicle is almost as impossible of accomplishment as drainage by massage.

I have only called your attention to a few of the more common operative procedures, so as to emphasize the importance of a familiarity with this region. There are many other conditions arising in the lower urinary and genital tract which demand this same special knowledge in their treatment.

DISCUSSION.

Dr. Maurice Heck, DeLand:

In discussing Dr. Knauf's paper, I would like to say that this is a particularly good presentation of the subject, inasmuch as he did not take up time with technical descriptions of specific operations but covered a great many valuable points, omitting tiresome details. One thing he mentioned which specially interested me is the operation for vesiculectomy or vesiculotomy. I had the pleasure of spending the summer with Dr. Cunningham of Boston several years ago, and I saw his work close up, and although I have never done the operation myself, I know his operation for "pus tubes in the male," as he calls it. I have seen cases of acute gonorrheal arthritis in twenty-four hours absolutely free from swelling and the pain gone by the time the patient had recovered from the anesthesia. Unlike Dr. Knauf's experience, the resultant loss of sexual power in Dr. Cunningham's cases was not so marked, but even if this were true, to mention tied up with gonorrheal arthritis and who have periostitis with bony spurs maybe in the knees or ankles and not able to walk, in pain for months, and unable to work, it is certainly a life-saver.

The operation was, I believe, first devised by Dr. Fuller in 1901. The technic is difficult, of course, but with the patient in an exaggerated lithotomy position the effected vesicles may be reached through an inverted "V" incision. The principal danger is of injury to the rectum in making the dissection and the operation of choice is a vesiculectomy and not a vesiculotomy; if the latter, remove the anterior portion of the vesicles and cauterize with pure carbolic acid, using drainage in either case as recommended by Dr. Cunningham.

Another thing Dr. Knauf mentioned was the operation for perineal section for the relief of stricture or for retention due to stricture. In

my experience, where stricture has not already caused a rupture of the urethra I have been able to get through either with a filiform followed by Gouley's tunneled metal sound, or LeFort's sound with filiform. If there are cases where that is not possible, then the thing to do is to incise boldly, using a metal sound in the urethra as a guide, and make a large enough incision and excise entirely the induration and scar tissue.

An attempt to approximate the ends of the urethra is often responsible for failure. An effort to absorb suture material will cause a sloughing off, but Nature will take care of that. Dr. Bowen of Jacksonville once said in connection with one of these cases: "You know, Nature is a good doctor if you don't interfere too much."

We sometimes have incontinence of urine following a perineal section. There is a very good article on this subject in the *Journal of the A. M. A.*, the issue of March 26, 1927, describing an operation for utilization of the gracilis muscle in the cure of incontinence which I would call to your attention. Time does not permit me to finish this discussion.

Dr. E. Clay Shaw, Miami:

There is one operation that Dr. Knauf did not mention in his excellent discussion of perineal operations, that I think should be called to your attention. I am referring to the radical operation for cure of carcinoma of the prostate as described by Dr. Hugh Young. The operation is applicable to the small group of cases in which the cancer is diagnosed before it has spread beyond the fascial planes of the prostatic capsule, and is usually followed by a permanent cure. The entire prostate and capsule is removed from the membranous urethra to, and including part of the trigone, also the seminal vesicles and ampullae of the vasa deferentia. The operative mortality is only slightly higher than perineal prostatectomy for benign hypertrophy and urinary control is usually retained.

Dr. A. R. Knauf, closing:

I suppose a lot of our conclusions in some of this work are guided largely by the results which we ourselves have obtained. My statement that there was a loss of sexual power following vesiculectomy, I think, is correct. I do not know whether this persists always.

I have done two radical operations for carcinoma of the prostate and in both of them the functional result was not very good. Another

thing, it is very difficult to tell whether the carcinoma is limited to the prostate or whether metastasis are present. Small carcinomas of the prostate are those in which a radical operation could be attempted. At the same time, the length of life in the cases in which there is very little enlargement of the prostate is usually much shorter than those cases in which there is a much greater enlargement. In malignancies of the prostate, I think the poor functional results are probably due to injury to the nerve, and possibly by better technic this could be obviated.

BISMUTH AS AN ANTI-SYPHILITIC MEDICAMENT*

MILTON M. COPLAN, M.D.,

and

ROY J. HOLMES, M.D.,
Miami.

Since the year 1495 writings and mandates on syphilis have been given to the world in voluminous form, so that now those who follow the science of medicine feel that our libraries are becoming saturated with worthless contributions. Indeed, the subject is one difficult to handle interestingly. And yet, in the realization of our inability to do full justice to the problem, we shall make an attempt to carry a message and prefer a challenge. Our time being limited, we shall deal only with that phase of the study of syphilis which pertains to the treatment. Even more specifically, we shall confine our remarks to the actions and effect of the metal bismuth, comparing it here and there to its sister drugs, the arsenicals and mercurials, for the purpose of evaluation. If by a correlation of thoughts we can hold your interest, and in the end have you accept the challenge to institute bismuth medication into your antisyphilitic armamentarium, then we shall succeed in acknowledging the splendid work of Sazerac and Levaditi in 1921 and 1923, which gave to the world its latest ray of hope against the "plague."

These men picked up the threads left by Robert and Sauton, who several years earlier had investigated the trypanocidal value of the drug. As early as 1786 Olin advised the use of bismuth in resistant gastric and cutaneous disorders, so that questions arise: was he treating syphilis?

and, was his work a forerunner to all modern investigation?

Aware, then, of what we wish to accomplish by the presentation of this thesis, and having heard a few words regarding the historical birth of the use of the drug, we offer for your consideration those criteria which have given bismuth an important place in the allied, organized treatment of syphilis. The antisyphilitic action of the drug is a proven fact. Sazerac and Levaditi, as well as many others, have shown that the drug is a spirilloicide of remarkable activity, and that its action is comparable to the best anti-luetic medicaments. It seems to work better than mercury, and more effectively, although less rapidly, than the more active arsenical drugs. That bismuth, especially in combination with salts, seems to possess splendid tonic properties is further proof of its value as a co-medicament to the arsenicals and mercurials, which usually have a much greater disintegrating effect on body tissues.

Where arsenic and mercury resistance is encountered, bismuth can be used with magnificent results, as we know of no instance of bismuth resistance, other than one such case reported by Lortat-Jacobs in France. We must digress for a moment, at this juncture, to call your attention to the fact that the so-called "arsenic and mercury resistance" is not always a verity. The Wassermann-fast state is a condition of equilibrium between the opposing forces of the patient and those of the infecting organism. The conflict may be decided one way or the other by ruling out other foci of infection commonly overlooked in our eagerness to destroy the spirochete.

Bismuth may very acceptably replace either or both arsenic and mercury should there be an intolerance to these drugs, and we can yet be assured of spirillicidal action. We can rely on the value of bismuth where it is necessary to replace intravenous treatment because of the inability to reach the vein. This applies, especially, to the treatment of congenital syphilis in children. Stamm, Betervide and Thenon report much better results from bismuth in such cases than from any other drug. Many syphiologists have observed far more beneficial effects from bismuth in the treatment of neuro-syphilis and meta-syphilis, than from its sister drugs. Such results are due, perhaps, to the fact that bismuth

*Read before the 54th Annual Meeting of the Florida Medical Association, West Palm Beach, April, 1927.

enters the cerebro-spinal fluid more readily and in greater proportion than salvarsan, while mercury is seldom, if at all, found in the fluid. Ravogli and Tsuzuki, working independently, have determined this fact.

Acquainted then with the spirocheticidal effect and the replacement advantages of bismuth, let us next consider at what position in the chain of organized treatment the drug is administered most effectively. All cases of primary syphilis, including those so diagnosed by the finding of the *treponema pallida* in the initial lesion, and all cases with secondary manifestations should receive bismuth immediately after the completion of the arsenic and mercury medication. Dr. Howard Morrow asserts, "Mercury finishes the work that arsphenamine has started," and we add, "Bismuth insures the effect of both."

The patient with latent syphilis and the active tertiary cases offer a different angle to the plan of attack. Should these patients, whose body tissues have become adjusted to the toxic invasion of so resistant infection, be suddenly subjected to any drug, which almost spontaneously attacks that tissue, and brings about severe reaction? We say, "No," and substantiate our belief in the contention that in such procedures much of the value of the medication is lost by reason of the fact that the activated tissue is incapable of properly assimilating the drug. Therefore, in our plan these patients first receive a series of bismuth, both for its spirillicidal and tonic effect. Following this we introduce mercury, and lastly, when by a milder form of assailment we have put the body in a more receptive state, we institute the arsenicals—at a time, we believe, when they are more effectual, and less toxic.

If the best results are to be obtained from bismuth, then the physician must familiarize himself with the various compounds acceptable to use, and procure that which he believes the ideal. There are two principle compounds of bismuth, the soluble and the insoluble, the latter being divided into the organic and inorganic insoluble. The most widely used soluble products of bismuth are the tartro-bismuthate, the ammoniacal citrate and triphenolated bismuth. Of the insoluble compounds, oily suspensions of tartro-bismuthate of potassium and sodium, iodo-bismuthate of quinine, precipitated bismuth and bismuth hydroxyde are the most prominent. Whatever the product used, one must choose that com-

pound which contains the greatest content of metallic bismuth, and still be administered with the minimum danger to the patient. That the soluble compounds are of greater metallic content is unquestioned, but they are admittedly much more dangerous from the standpoint of intoxication and accident at the site of injection. We, therefore, have relied on larger quantities of an insoluble product, quinine-iodo-bismuthate, which is fairly free from toxic effects, affords little to fear from local accidents, and possesses in addition to bismuth, two splendid tonic drugs, quinine and iodine.

Just what is the true physiological behavior of bismuth, we can not say, but let us review, for a moment, a few of the theories expressed by others on this issue. Ramos believes that the antiluetic action of bismuth is primarily in the production of antibodies which come from rapid cleavage of complex bismuth molecules to alkaline muscle tissue. Sharing the same view, that the drug is not a direct spirillicide, are Cowen and Palmer who contend that the effect is through a bio-chemical change. Levaditi has shown that sodium and potassium tartro-bismuthate produces rapid cicatrization of luetic lesions in all stages of the disease, and this gives further strength to the hypothesis of Ramos. This we believe; once absorption begins from the site of injection bismuth circulates as a protein-bismuth molecule, and enters the cerebro-spinal fluid readily.

The toxicity of the drug, if properly used, is almost nil. It appears, however, that the kidneys are the least resistant of the body tissues. In the presence of bismuth therapy there is an elimination of granulation cells, cylindroids, fatty and kidney epithelia, but there is almost total absence of albuminuria. The findings indicate a mild toxic nephrosis and irritation of the urinary passages. That the renal irritation clears up rapidly after treatment has been discontinued has obtained in our work, and many others who have contributed to the literature are of the same opinion. Alike unto the arsenicals and mercurials, if given in excess, bismuth will produce marked loss of weight. It should never be administered intravenously, since it is through this route that it is very toxic. Intra-muscular injections are only slightly toxic, if at all, due, it is presumed, to the momentary fixation of bismuth in the tissues. Furthermore, the toxicity

is reduced if the drug is given in oily suspension rather than aqueous solution. We have never seen a Herxheimer reaction from bismuth, and have met with no reports of such in the literature. However, there do occur, at times, symptoms that evidence the toxic threshold. These are practically synonymous with the mercurial reactions, most notably a stomatitis. Sodium thiosulphate is recommended to counteract bismuth intoxication.

Of far more importance than calling attention to the toxic effect of bismuth, is to warn that accidents in administration are to be feared. Unavoidable accidents such as "sterile" abscess or even arteritis obliterans, a case of which was reported by Barthelmy, might occur in spite of all painstaking efforts. And yet careful technique will minimize our bad results. Always ascertain that the needle is free of blood vessels before giving an injection. Toxic reactions and painful haematomas are thus avoided. Myositis, should such a complication arise, is to be considered the result of slow absorption, and cessation of injections into the region of affliction is advised.

It is not our intention to burden you with charted statistics summarizing our observations of the action and effect of bismuth. However, we should like to state that in our experience in almost two hundred cases, the effectiveness of bismuth medication in the latent and neuro-syphilitics has been a pleasant thing to observe. In the time that we have used bismuth in conjunction with the arsenicals and mercurials, we have had not a single case of primary or secondary syphilis to give a positive sera reaction as early as one year after completion of medication. During this period we have seen twenty-nine cases that had received complete courses of salvarsan and mercury elsewhere, yet came to us with positive blood sera. Of this group only two remained Wassermann positive after bismuth medication, and both proved to be of the cerebro-spinal type.

In the latent and neuro-syphilitics, we proposed to treat not only the blood, but also the clinical manifestations. Of the latter group, most every patient has shown marked physical improvement, and the blood reactions have been reduced. Practically every latent case is now blood and spinal fluid negative.

From our cases, we can report only two accidents of a serious nature. One case with a pre-

existing nephritis developed symptoms that became alarming until we stopped administration of the drug. The other was a case of gluteal abscess which, although quite painful, responded nicely to drainage and applications of heat.

We are not ready to evaluate bismuth as a preventive of relapse, as our work is too recent, but it is generally agreed by those who have observed the drug for a longer time that it possesses that characteristic to a variable degree.

In the foregoing there has been an endeavor to bring you "face to face" with the possibilities of bismuth medication in syphilis. We have, in a brief manner, offered such data as is necessary to establish the value of the drug. And, further, we have ventured to say in which cases and when administered in the order of treatment the drug is most effective. Without making an effort to declare the superiority of any one compound, those most commonly employed have been brought to your attention with the remark that we have found the oily suspension of quinine-iodo-bismuth very active. Theories of the physiology and remarks on the toxicology of bismuth have been advanced, briefly, simply as factors for consideration. That accidents do occur, both at the site of injection and in remote tissues, from the use of the drug has been mentioned, not to lessen your faith in the medication, but to stress the importance of perfection of technique. The meager exposé concerning our observations of bismuth therapy is not given to laud personal success, but to show that results obtained by us are consistent with the reports of others employing the drug.

In concluding: We agree with Brocq that "we do not yet possess the proper remedy for syphilis, one which has high treponemicidal properties, real and rapid efficacy, and at the same time not having dangerous properties for the human organism." And yet, to quote from another student, "from the evidence already abundantly at hand, and from the testimony constantly increasing in the medical press, the efficacy of bismuth in the treatment of syphilis can no longer be doubted." So, if we believe, as does J. Harper Blaisdell, that "syphilis will appear in the home of tomorrow in proportion to the inadequacy of treatment today," then it behooves us to accept bismuth as a part of our adequate combative equipment.

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DISCUSSION.

Dr. H. S. Geiger, Kissimmee:

Dr. Coplan has covered this subject very fully and I can only stress certain points that seem to me to be especially important. Although bismuth as an anti-syphilitic remedy is a relatively new addition to our therapeutics, its value seems assured. It occupies a place between mercury and arsenic. Discussion in the literature appears to be limited to the mode of administration and the choice of preparations. The insoluble salts of bismuth appear to be dangerous, and bismuth oleate and bismuth salicylate also are not without objection. A soluble salt of bismuth such as bismuth potassium tartrate would be a suitable preparation.

In regard to the mode of administration, in this day of intravenous medication, I should like to lay emphasis on the fact that the intravenous injection of bismuth is absolutely contra-indicated. The toxic effects of bismuth should be kept in mind, both local and systemic. The local

effects would be abscess formation and sloughing of tissues and the systemic effects would be those of any heavy metal.

The indications for the use of bismuth are these: In congenital syphilis combined with arsenic, such as arsphenamine, bismuth appears to have a particularly beneficial effect. It is also valuable in those individuals who are hypersensitive to either mercury or arsenic. It has a seemingly selective beneficial effect in visceral syphilis.

Dr. M. J. Flipse, Miami:

It seems rather peculiar that an internist would arise to discuss the paper of a genitourinary man. However, the subject of syphilis is of interest to every practitioner of medicine, whether he devotes his attention to one or another of the specialties. Naturally, the interest of the internist lies in those cases which are discovered in connection with other complaints, such as cardiac syphilis, aortic aneurism of luetic origin, etc.

Dr. Coplan has very well covered the subject of the administration of bismuth and it remains to me only to point out a few facts which I have observed. My attention was first called to this treatment by Ravogli seven years ago, at which time I was treating a case of luetic cirrhosis of the liver. The patient was given one dose of arsphenamine and very nearly died. He was then given mercury and a very violent stomatitis was produced. The blood count dropped to 1,500,000 reds and 20 or 30 per cent hemoglobin in a very short time, and transfusion was resorted to, to save his life. In that emergency I talked with Dr. Ravogli and he said that the French and Italian literature was showing some reports on the use of bismuth. The only preparation then obtainable was quinine-iodo-bismuthate. This was given with the most remarkable results, and since then I have used it in all late cases.

During the last seven years I have no record here of all the cases I have treated, but expect a considerable number, over two or three hundred, and they cover all types and varieties of medical syphilis. The predominating thing I have noticed has been its most remarkably low toxicity. Practically all of these cases have received bismuth, and I have never yet seen a case develop acute symptoms. I may say it is my policy to give three-tenths grains of quinine-

iodo-bismuthate, which is equivalent to about $1\frac{1}{2}$ grains of metallic bismuth, per dose. I have found the insoluble salts more satisfactory than the soluble, using principally those made in this country. The soluble salts are very much more painful and where these have been used following the other, the patients always ask to have the "older" preparation used.

One or two cases are of interest, I think; one case in particular stands out. A man, age 65, with a history of epilepsy for three years, on examination showed definite findings of brain tumor. His mentality was gone, pupil dilatation unequal, man practically unconscious. In the face of these findings, after having proven the presence of a positive Wassermann in the spinal fluid and in the blood, we administered bismuth, and after two years of medication, the patient has regained his memory, has had no more seizures, and now, to all intents and purposes, is well, with the spinal fluid and the blood negative.

Dr. Julian E. Gammon, Jacksonville:

I want to bring out one point in the treatment of visceral syphilis, especially cardio-vascular and central nervous system syphilis. It is best to prepare the patient having visceral syphilis with intra-muscular injections of bismuth, or mercury on injection or inunction, and iodides, later going to salvarsan, provided there are no contraindications. Salvarsan given intravenously at the onset of treatment of visceral syphilis will frequently cause disastrous results. Bismuth has about replaced mercury for intra-muscular injections. First, because it is on a par with mercury as a spirochaeticide. Second, the injections are less painful and are not nearly so likely to irritate the kidneys.

I have recently seen, in consultation, a boy with congenital syphilis and acute nephritis with edema and hypertension. His father died of locomotor ataxia and his mother had a positive Wassermann and has been thoroughly treated. The boy also has had a positive Wassermann and had treatment, but at the present time his Wassermann is negative. There was no explanation for the cause of the nephritis other than syphilis. He was put on bismuth salicylate intra-muscularly and shown rapid and marked improvement, so I have been told by his physician. Injections of salvarsan in a patient with acute nephritis would very probably have disastrous

results even though the lesions were due to syphilis.

Dr. M. M. Coplan, Miami, closing:

I am glad that those who have discussed our paper manifest such keen interest in the subject for that is what we had hoped to accomplish in its presentation. In so short a period of time, one can not handle the problem of treating syphilis completely, so necessarily many phases were left untouched. I was also glad to hear one of the gentlemen mention the disastrous results quite often obtained in "pushing" the arsphenamines in tertiary syphilis. We have such an example under our care at present, a young man, age 36, with right-side paralysis. His family physician in another city made a diagnosis of syphilitic gumma, but we feel that this young man has had a "cerebral accident" due to too frequent as well as too strenuous treatment with neoarsphenamine.

However, the main point that is brought forth both in the thesis and discussion is simply that bismuth deserves our attention as an antisyphilitic agent. And since all of us practicing medicine deal with syphilis of some type or other, we should try the drug and give it a chance to prove its worth. * * * I thank you.

ECTOPIC PREGNANCY

B. T. PRATHER, M.D.,
St. Petersburg.

Ectopic pregnancy is a gestation which occurs outside of the cavity of the uterus. The ovum may be fertilized and remain at any point from its passage from the ovary to the uterus. The most common sites of its nesting are the tube, its medium, ampullary or its uterine or interstitial portions in the order named and lastly the ovary. Other positions on broad ligament and omentum are rare. As the ovum distends its container other structures are encroached upon, adhesions form between them and the primary topography of the gestation is modified. When the tubal wall bursts, the fetus escapes into the abdominal cavity, or in a mass of preformed adhesions we speak of tubo-abdominal pregnancy. We also speak of tubo-uterine ovario-abdominal; these are secondary forms. There is probably no subject in obstetrics which is more important from the point of diagnosis than that of ectopic pregnancy and it is often

overlooked or misunderstood in the interpretation of its symptoms. I wish to bring to your attention a few points which make the diagnosis more easily grasped. It is possible to make a diagnosis of an ectopic pregnancy before the tragic stage if proper credit is given to the history, symptoms and physical signs, for the majority of ectopics present a symptom complex that is definitely characteristic, and which have a definite relation to the pathologic changes in the tube and the adjacent peritoneum. Most cases are ruptured or aborted before the twelfth week. Some cases go on to full term abdominal pregnancies as a result of early tubal rupture. Some cases terminate in a secondary rupture of an intra-ligamentous pregnancy at the third, fourth or fifth months.

History—(1) Ectopic pregnancy occurs in women giving a previous history of a definite infection following marriage, intra-uterine instrumentation, abortion or child birth, intra-abdominal operation followed by peritonitis with an intervening period of sterility which has allowed sufficient time for a partial recuperation of the tubes. Most cases fall in this type.

(2) In women presenting a history of dysmenorrhea from the first occurrence of their menstrual functions. These cases on examination have shown many developmental defects as infantile uterus, narrow vagina, funnel pelvis, and who have remained sterile after marriage for various periods, and finally following some procedure for cure of sterility they developed an ectopic.

(3) Found in women notably of Jewish, Irish or Italian race who have repeated intra-uterine pregnancies at close intervals, either ending in abortion or going on to term, and who without explainable cause develop an ectopic. This group contains less numbers than the others.

Clinically all ectopics fall into two general classes. Those which may be classed in the nontragic stage with a pulse distinctly countable of 100 or under with a systolic pressure of 100 or over and a hemoglobin of 60% or more, and those in the tragic stage pulseless at the wrist with a blood pressure below 90, hemoglobin under 50% and definite signs of internal hemorrhage and collapse. Probably in no other condition is the history of such importance as in ectopic pregnancy; for when the fecundated ovum is arrested in its transit through the tube, a makeshift decidua not thick enough to harbor

the ovum and to protect the underlying muscle and venous radicles from the erosive action of the trophoblast cells is developed. It is not a true decidua as found in the uterus but a decidual reaction seen throughout the mucous membrane of the tube. It is largely because of this inefficiency of this decidual layer that we get our suggestive history and the characterization signs and symptoms. Fecundation produces the amenorrhea, but because of the erosive action of the syncytial cells, the ovum which tries to erode itself into the basic decidua which is imperfectly developed, riddles the muscles and penetrates the venous radicals with resulting hemorrhage into the decidua. This in turn tends to unseat the ovum, overdistends the tube and causes pain and bleeding. The syncytial cells erode into the smaller venous radicals of the muscle coat because the decidua is too thin to protect deeper layers. This causes numerous small hemorrhages into the decidua and into the muscle fibers of the tube wall, partially dislodges the ovum and causes ovular unrest which in turn causes clinical symptoms of colicky pains in the region of the gestation sac. The uterus and tube are genitically identical, being composed of the same tissue. This unrest or peristaltic wave is transmitted to the uterus and there are uterine contractions with slight bleeding from the endometrium. This blood mixed as it is with mucous from the hypertrophied utricular glands produces the characteristic bloody discharge which does not clot, which is a familiar diagnostic sign. The effusion of blood into the decidua which results from the progressive erosion of the ovum, also finds its way into the lumen of the tube and leaks out into the peritoneal cavity. The tube prolapses and falls into the cul-de-sac. This peritoneal reaction explains the occurrence of four symptoms:

(1) The slight elevation of temperature which is present in a majority of cases.

(2) A moderate leukocytosis.

(3) The exquisite sensitiveness of the cervix to any motion which is always present in physical examinations of these cases.

(4) Pain in defecation, caused by the fecal mass as it passes between the uterosacral ligaments. With this brief reference to the pathology it can be seen that the following points can be elicited in a history of the majority of cases of unruptured pregnancy.

a. Ectopic pregnancy occurs most frequently where there is a congenital anomaly or previous inflammation of the tube in women who give a history of premenstrual dysmenorrhea.

b. Like other pregnancies there is either a period of amenorrhea or an attempt at menstrual suppression, but because of the unstable position of the ovum owing to the imperfect developed tubal decidua and erosion of the ovum into the underlying muscle and venous radicals, bleeding occurs into the decidua and produces ovular unrest, causes tubal distension and peristalsis which causes colicky pains and uterine bleeding.

c. This bleeding into the decidua and the growing ovum distends the tube and causes the soreness and tenderness over the region of the gestation sac. On bimanual examination cervix is generally soft, uterus is somewhat enlarged, but the elasticity of the medium portion is absent, unlike normal pregnancy, the cervix is exquisitely sensitive to motion. This is shown by palpation and is due to the peritoneal irritation from the blood which gravitates from the end of the tube, or through the tubal wall because of its porosity and also to the prolapse of the tubal mass into the cul-de-sac. This reaction of the peritoneum covering the uterosacral ligaments makes them sensitive and anything which moves them causes exquisite pain. This important sign of pain on movement of the cervix is present in all cases of ectopic gestation.

The pulsation of the uterine artery is more apparent on the side of gestation, after rupture more so. The blood supply is increased on the side of the pregnancy and vessels enlarged, the pregnant tube drops owing to its weight. The artery is depressed and brought more within reach of the finger. The uterus is displaced because of the tubal mass or tumor. There is little displacement in the early cases. The tumor displacing the uterus is of rapid growth due to growth of ovum and extravasation of blood which takes place in the muscle and decidua in the tube. This mass is sensitive because the tubal covering is stretched to its utmost. When rupture or tubal abortion occurs there is sudden and great pain, due to the erosion through the tubal wall. The peritoneum reacts immediately and there are signs of intra-abdominal calamity, namely, pain and shock of greater or less degree. If hemorrhage is inconsiderable the patient will react, but if considerable there is a continuation of the shock and the patient goes into collapse;

pulse increases, blood pressure drops and there is a leukocytosis. Primary rupture or abortion generally occurs before the eighth week and is seldom attended with tragic symptoms. There is usually an intervening period of a few days or a week or more before the secondary rupture occurs. The first danger signs should be heeded and not wait until the tragic stage. Most anyone can diagnose a case after the tragic stage has occurred.

Treatment.—All cases should be operated upon by the abdominal route, the tube removed or emptied of its contents.

In the tragic stage we are dealing with a different proposition, the patient is in shock and has lost blood. However, some surgeons do operate immediately on all cases, and this is probably all right in a number of cases, because by the time the patient is taken to the hospital and the surgeon gets ready to operate, the patient would have bled to death if she was going to. Her blood pressure has fallen, the blood has clotted, hemorrhage has stopped and the patient has begun to react. Pollok says less than 1% bleed to death, rupture is generally through a twig instead of a main vessel. Bleeding continues, blood pressure falls, a clot is formed. The patient begins to react, feels well for a day or so, then a secondary rupture occurs. The time to operate best is past. Almost all cases will come back with rest and morphine and then an operation can be done. There are some men who do not operate on any cases and claim good results, but the consensus of opinion is against this method. It might be a good idea to give bleeding cases thromboplastin or haemostatic serum.

CONCLUSIONS.

Ectopic pregnancy may be diagnosed if one follows this routine. History, occurs in women with previous history of pelvic infection, in those with dysmenorrhea or defects of foetal development—in those with rapid increase in families, cause unknown.

Cases, are divided into montragic and tragic. Nontragic cases, pulse under 100, systolic over 100, hgm. over 60%.

Tragic Cases.—Pulseless, pressure under 90, hgm. under 50%. There is a characteristic bloody discharge which does not clot. Slight temperature, moderate leukocytosis. Tender cervix, pain on defecation. These, along with

amenorrhea or attempt at suppression, followed by abdominal pain, collapse and signs of internal bleeding complete the picture. Operate after reaction in tragic cases. Nontragic cases by appointment, by abdominal route.

LIVER EXTRACT IN HYPERTENSION REPORT OF SIX CASES*

M. JAY FLIPSE, M.D.,
Miami.

Arterial hypertension, or high blood pressure, has attracted considerable attention in the last ten years, not only on the part of the medical profession but the laity as well. The common occurrence of this malady, the imposed disability which ensues, the not infrequent spectacular complication of cerebral apoplexy, and the absence of specific treatment, is recognized by the general public. It is natural, then, that a newspaper announcement of the discovery of a "cure" for high-blood pressure was greeted with acclaim by innumerable sufferers upon whom had been imposed unpleasant restrictions of diet and activity. Almost before the profession had become informed through the medical literature of the nature and limitations of this new treatment, our patients were questioning us regarding its efficacy. In response to this demand, we began experiments on a number of severe hypertension cases early in 1926. After a year's observation, we are prepared to make a preliminary report.

The pressor and depressor effects of certain tissue extracts has been recognized by various investigators for more than twenty years. Oliver and Shafer (1) in 1895 reported reduction in blood pressure in animals experimentally treated with aqueous and glycerin extracts of thyroid, spleen and parotid glands. In 1909, Popielski (2) noted depressor effect of extracts of thymus, stomach, brain and pancreas. Fawcett (3) and his collaborators in 1915 reported the isolation of an alcohol soluble "residue" from the thyroid which exhibited depressor activity out of proportion to its nitrogen and iodine content. Abel and Kubota (4) attributed the depressor activity of various tissue extracts to histamin. In 1921 and 1922, Roger (5) reported results of experiments with liver extract on blood pressure. Ralph Major (6), at the University of Kansas School of Medicine, and S. J. MacDon-

ald (7), of St. Catharines, Ontario, working independently on liver extracts, reported their results simultaneously in July, 1925. Major treated 42 cases by intravenous, intramuscular and subcutaneous methods, using a purified liver extract practically free from cholin, histamin and peptone. Six of his cases, or 14%, were "refractory" to the treatment. The other 86% showed a fall in systolic blood pressure, varying from 20 to 70 m.m. of mercury during the first hour after injection. He noted no toxic effects and little or no change in individuals with normal pressure. Macdonald, in a series of 33 patients, gave liver extract intravenously with excellent depressor effect, but 25% of his cases showed reactions of varying intensity.

In the last two years, a number of reports have been made showing the effect of liver extract on animals whose blood pressure has been artificially raised with guanidin or related protein substances. Other observers have pointed out the more striking effect of liver extracts on patients with essential hypertension and the less satisfactory response in cases of hypertension due to arteriosclerosis and nephritis.

We have not found in the literature any reports upon patients who have been observed over a prolonged period of time. In our series we have treated more than thirty cases of hypertension. We are reporting only those cases which have been under treatment and observation for a sufficient period of time to warrant conclusions being drawn. The balance have been excluded because of inadequate observation or incomplete treatment. No effort has been made to select cases of "essential hypertension" or those with definite kidney lesions.

Case No. 1.—H. F., female, age 56, weight 150, height 5 ft. 5 inches. Observed in June, 1924, complaining of headache, vertigo, visual disturbances, lassitude, cardiac irregularity and precordial oppression, indigestion and nocturia.

Physical findings: Cardiac hypertrophy with occasional premature contractions. Blood pressure 280/160. Slight diffuse vascular sclerosis. Retinal vessels not sclerotic and no albuminuric retinitis. Slight edema of lower extremities. Chronic tonsillitis. Urine: Gravity variable 1002 to 1020, with faint trace to two plus albumin, occasional cast and frequent pus cell. Renal function: 38% phthalein in two hours following intravenous injection. Clinical diagnosis: Chronic interstitial nephritis of advanced de-

*Read before the Dade County Medical Society, March 4, 1927.

gree. Hypertension. Chronic myocarditis. Cardiac hypertrophy. Progress: Under rigid dietary and rest regimen with nitrites, patient improved and blood pressure declined, averaging 200 to 220 systolic and 110 to 130 diastolic. In January, 1926, nitrites became ineffectual, and in spite of medication, pressure gradually rose to 255/155 in June, 1926. At this time treatment with liver extract was instituted, 1 c.c. subcutaneously daily. When 4 c.c. had been given the pressure was 185/130. Two days later, accompanying an acute tonsillitis, the pressure was 230/150. After 15 daily doses were given, pressure was 190/120. During the next month 1 c.c. every second or third day maintained the pressure at this level. At this time the tonsils were removed. In the next three weeks, with 1 c.c. every second day, the pressure fell to 178/110. Since this time the injections have been given more or less regularly, at intervals of from four to seven days, and the pressure remains near 200/120. It has been evident, however, that the omission of the injections for two weeks or more is followed by a rise of blood pressure to about 230/130. General physical condition at the present time is much improved, the heart regular, the urine of low gravity, but usually albumin-free, and the renal function 55% in two hours (intravenous injection). The patient has remained on a restricted diet throughout the experiment.

Case No. 2.—C. H., male, age 62, weight 200, height five feet ten inches. First observed in July, 1924, complaining of asthma and chronic cough. No cardiac symptoms, nocturia once nightly.

Physical findings: Chronic bronchitis; mild bronchial asthma; pulmonary emphysema; slight cardiac enlargement; aortic regurgitation of moderate degree. Blood pressure 190/85-200/95. Retina normal, no arteriosclerosis, no edema. Temperament neurasthenic. Urine normal; phthalein 65% in two hours. Blood Wassermann negative. Clinical diagnosis: Essential hypertension; bronchial asthma; chronic bronchitis; pulmonary emphysema; neurasthenia. Progress: Rigid dietary regimen showed marked improvement in asthma, but no change in blood pressure. Business worries frequently elevated pressure to 230/110. Daily dose of 1 c.c. of liver extract, subcutaneously, begun in May, 1926. After four doses pressure fell from 200/90 to 165/75. Injections given at intervals

of from three to seven days up to the present time. The pressure can always be controlled, but invariably becomes elevated if the medication is omitted for two weeks. The patient's mental state seems to determine his pressure level. His diet has remained moderately restricted throughout the experiment.

Case No. 3.—H. G., age 58, weight 174, height 5 feet 5 inches, occupation, nurse. First observed April, 1924. Complaining of edema of lower extremities and visual disturbances.

Physical findings: Heart enlarged 2 c.m. to left and soft mitral systolic murmur with roughening of first sound at aortic area. Blood pressure 228/130. Extremities: Slight edema of feet and ankles. Urine negative except for occasional hyalin cast and few pus and epithelial cells. Blood chemistry: Urea 35; uric acid 11.2; creatinine 3. Renal function: 12% in two hours. Clinical diagnosis: Chronic nephritis, hypertension, chronic myocarditis, nitrogen retention. Progress: One c.c. of liver extract was administered at once and 1 c.c. the following morning. The patient had violent headache and pain in the arms and legs following first injection, with symptoms of collapse. Blood pressure 24 hours after second injection was 150/100. The urine was scanty, of high gravity, and contained albumin, many casts, pus and blood cells. Strychnine and digitalis were given. In three days the urine cleared and blood pressure rose to 178/100. It has remained at this level except for an occasional slight elevation for eleven months. The patient has had an occasional small dose ($\frac{1}{4}$ c.c.) of liver extract and shown no symptoms of depression. The heart is compensated and there is no edema. Blood chemistry three months after first examination showed urea 36.4, uric acid 2.5; creatinine 1.9. Renal function 45% in two hours. Diet has been moderately restricted throughout this experiment.

Case No. 4.—R. O., male, age 42, weight 146, height 5 feet 10 inches. First observed July, 1926. Complaining of nephritis and hypertension, which had been recognized for at least ten years. Subjective symptoms negligible. Consisted of slight fullness in head and nocturia.

Physical findings: Eye grounds normal. Heart slightly enlarged to left, but competent. Blood pressure 250/180. No edema. Urine: Heavy albumin; constant casts; pus and red cells. Specific gravity varied from 1002 to 1010. Blood chemistry: Urea nitrogen 30.8; uric acid

2.6; creatinine 1.57. Renal function 55% in two hours. Clinical diagnosis: Chronic diffuse nephritis, nitrogen retention, hypertension of renal origin, cardiac hypertrophy compensatory. Progress: Rigid diet and rest in bed failed to alter blood pressure. One c.c. liver extract every day reduced blood pressure to 200/220/140, where it remained with doses every second or third day for three months. Patient then declined further treatment. Blood chemistry showed urea nitrogen of 36.4. This patient has since been under treatment with calcium and parathyroid, which has reduced retention of nitrogen to urea nitrogen of 12, but the blood pressure has remained constantly high, averaging 260/180. The urine is much improved and there are no subjective symptoms.

Case No. 5.—S. C., female, age 50, weight 155, height five feet six inches. First observed December, 1925, complaining of menopause symptoms, weakness, headache and vertigo, visual disturbances, cardiac distress and irregularity, and nocturia.

Physical findings: Eye grounds, albuminuric retinitis. Heart enlarged, occasional premature contraction. Blood pressure 240/140. Blood vessels not sclerotic. Urine: Gravity 1002 to 1020. Albumin negative or faint trace. Casts found in all urine voided during afternoon and early evening. Pus cells constant. Blood chemistry and kidney function not obtained. Clinical diagnosis: Chronic nephritis (interstitial?), hypertension, chronic myocarditis, and cardiac hypertrophy. Progress: Pressure was reduced to 200/120 by use of nitrites during the first month of observation. Liver extract then given, which failed to alter pressure more than 10 m.m. systolic, although as much as 3 c.c. was given daily. She received two or three c.c.'s at frequent intervals for nine months. Her symptoms then became worse and in December, 1926, she died from cerebral apoplexy.

Case No. 6.—J. C., female, age 45, weight 135, height five feet five inches. First observed December, 1925. Complaining of headache. Pressure had been normal up to 1923. Since that time family trouble had ensued and pressure had risen to 180 systolic.

Physical findings negative, except for a blood pressure of 230/140. Patient of nervous temperament. Urine negative. Specific gravity varied from 1002 to 1020. Blood chemistry showed urea nitrogen of 30.8, with creatinine

1.09. Clinical diagnosis: Chronic interstitial nephritis; nitrogen retention; menopause disturbance. Progress: Under nitrites, blood pressure was reduced to 180/120, with no relief of headache. Liver extract was then given in usual manner. Subjective symptoms were improved, but blood pressure showed only temporary reduction of 10-15 m.m. systolic. Treatment continued until December, 1926, and was then discontinued.

Comments: In observing these six cases and cases of hypertension associated with uremia, advanced arteriosclerosis, etc., we concluded that in the majority of cases blood pressure could be reduced temporarily with liver extract. In a case of advanced arteriosclerosis, the pressure level failed to change, but the patient noted a decided relief from subjective symptoms as long as the drug was continued.

In administering the drug, following our experience with case number three, we began with $\frac{1}{4}$ c.c. and had no further difficulty with violent reactions.

SUMMARY

(1) Six cases of advanced hypertension are reported in which liver extract was used for a considerable period of time.

(2) Liver extract reduces the blood pressure in cases with kidney diseases, but its effect is not permanent except in rare instances.

(3) The general well-being of the patient is usually improved by the continuous administration of liver extract.

(4) Liver extract is an adjunct in the treatment of hypertension and of special value where the pressure is at dangerous levels.

(5) Liver extract is effective in many cases where nitrites and related vasodilators fail to reduce the blood pressure.

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THE RECOGNITION AND MANAGEMENT OF THE ACUTE ABDOMEN FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.*

EUSTACE LONG, M. D.,
Madison.

The writer had no gloves on while writing this paper nor shall he use any in reading it. We have been grievous offenders and while he has no apologies to make, he would like it well understood that any criticism herein made, is done so in the friendliest of spirit and to remind us as general practitioners that in the presence of the acute abdomen our responsibility looms large and serious, and it would be well to say at the outset that every abdominal condition should be regarded as potentially acute or surgical until it is definitely proven otherwise. Along this way alone lies safety, while any other course leads to uncertainty and, too often, disaster. And, if we will only sink the fact deep into our minds and keep it ever before us that the best possible service we can render is early recognition of the condition on our part and to save the patient from himself, his family and friends. Then, and not till then will we not so often see the unfavorable and tragic results due in the main to delay, malicious medication and mismanagement.

It is desired that it be thoroughly understood that it is not the purpose of this paper to discuss the relating or differentiating points of gastric ulcer, gall bladder disease, appendicitis, strangulated hernia or any other localized abdominal lesion. Nor is it believed that it is desirable on our part to consider these in the presence of the acute abdomen, and were I to add a new name or condition to our nomenclature of diseases, I think it should be the acute abdomen.

As a primary condition there is no such thing in the category of diseases as acute indigestion or bilious colic (whatever that may mean), but who among us have not heard these terms used as if they were final and sufficient to explain the entire situation. Gentlemen, we seriously indite

ourselves when we use such terms as constituting a disease. Indigestion, like pain, or temperature, is a symptom, let it be gastric or intestinal.

"The general rule can be laid down that the majority of severe abdominal pains in patients who have been previously fairly well, and which last as long as six hours, are caused by conditions needing surgical intervention." There are exceptions, but the generalization is useful if it serves to call attention to the need for early diagnosis.

RECOGNITION

The term is advisedly used, for we, as general practitioners, are concerned not so much with a detailed diagnosis—that is for the surgeon—but we should be very much concerned as to whether or not this patient is going to reach the surgeon in condition for the best results. And this depends almost entirely on our *prompt* recognition and subsequent management. When seen *early* it is a serious reflection on us when a patient comes for surgical treatment with an abdomen full of pus and a general peritonitis; there are very few extra-abdominal conditions giving abdominal symptoms to differentiate, so few in fact that it would seem very simple and the writer is of the opinion that if we would array the symptoms, one or more of which are common to practically every intra-abdominal condition, and rule out of our minds the detailed diagnosis of appendicitis, gastric ulcer, gall bladder disease, or what not, the matter of diagnosing the acute abdomen would be very much simplified and valuable time saved. It is amply sufficient for us to recognize the existence of an abdominal lesion and act and advise accordingly.

Probably the most prominent and constant symptom in the acute abdomen is pain and tenderness. The locality of the pain or tenderness matters little and is of no special consequence to us. There is but one question for us to determine and that is, Is it extra- or intra-abdominal in origin?

Posture is probably the next most common symptom and as a differentiating point as to inflammatory or noninflammatory processes, it is very important, for the patient with an inflammatory condition involving the peritoneum is very guarded and cautious in his movements, while it is the rule to find the patient with a process not involving the peritoneum, such as gas or renal colic, and some of the pelvic conditions in the female, tossing, rolling or twisting

*Read before the Suwannee County Medical Society.

with pain; and by contrasting this with the usual cautious and guarded attitude of the patient with an inflammatory process involving the peritoneum, we can very generally form a very clear opinion as to whether or not the patient is suffering with a peritonitis.

Abdominal rigidity is probably third in frequency but by no means a constant symptom and at times very slight or absent altogether.

The next symptom of importance is nausea with or without vomiting, by no means constant and in a large per cent of cases does not occur at all. Constipation, or not, is of very little value except as a differentiating point in a detailed or localizing diagnostic procedure.

Temperature and pulse are of the least value and most variable of all the symptoms and, strange to say, these two symptoms are the ones given first place by some of us in reaching a conclusion as to the existence or nonexistence of a serious abdominal lesion. The writer has on a number of occasions known it to be doubted that a serious abdominal lesion existed for the sole reason that the temperature and pulse were normal or about so, and he has seen the abdomen containing a pint and more of pus, showing very little or no temperature and pulse very slightly or not at all accelerated. If the temperature in a suspected acute abdomen is of any value whatever it is as a differentiating point. The higher the temperature the greater is the likelihood that the condition is extra-abdominal, while, taking it with other abdominal symptoms, the lower it is the more certain the existence of an abdominal lesion, and if subnormal in the majority of cases it is indicative of a grave condition.

HISTORY

Because of its importance it is mentioned last in the list of positive symptoms. There will generally be a history of former attacks of pain and soreness, indigestion, jaundice or typhoid fever, and remembering that one or all of these conditions is the sequel of an inflammatory process, either recent or remote, we should have no trouble getting a lead when taken with symptoms existing at the time, enabling us to reach a safe conclusion. But, since every acute abdominal lesion has to have its beginning some time, let's not make the serious mistake of presuming that because of a negative history there is not a possibility of this being the initial attack.

DIFFERENTIAL DIAGNOSIS

There are not many extra-abdominal conditions giving abdominal symptoms to be ruled out and should give no serious difficulty, the principal ones being: pneumonia, diaphragmatic pleurisy, tabes dorsalis, and influenza. Abdominal symptoms in these conditions are not the rule, but exceptionally they exist, and usually it will be found that the general symptoms will outweigh the abdominal manifestations.

Fever will be present from the outset and usually high, excepting in tabes, which is not the rule in abdominal lesions. In thoracic disease there will be pain in the chest as well as the abdomen, and there will be the other chest symptoms not found in abdominal conditions. It will be found that pressure on the opposite side of the abdomen in pain of abdominal origin, will increase the pain on side affected, while if Thoracic in origin it will be uninfluenced. And, to rule out Tabes Dorsalis, if we will test the Pupillary reactions and knee jerks, we should have no trouble there.

MANAGEMENT

Again the term is used advisedly. Gentlemen, we can not treat the acute abdomen, and the sooner we learn this the better. There is positively but one treatment and that is surgical. We should recognize this fact and not go along with purgatives, poultices and narcotics till the face of the patient tells us much we should have known at the beginning. Who has not seen the dull gaze of the hollowed eyes, the ashen countenance and the shrunk cheeks as a result of toxemia, and our failure to recognize at the outset the serious possibilities (the acute abdomen, if you please). Referring to purgatives and opiates it was the immortal Murphy who, deploring the almost criminal and all too common practice of using purgatives in attacks of appendicitis, formed the phrase of "Three P's—Pain, Purgative, Perforation," while it was Harvey saying that in conditions possibly serious but doubtful "Our opiate covers the red light without closing the switch."

Purgatives and laxatives are mentioned here to be *unqualifiedly condemned* in the case of the acute abdomen or one remotely suspected of becoming acute. They have been the cause of more tragedies than all the novices practicing surgery combined. As for the use of narcotics, they should be used with great caution and not

at all until we are fairly well satisfied of the existing condition, and either the patient, his family or friends advised of the condition, what will probably be necessary, and their consent secured. Remember we can narcotize the patient into a false sense of security in which the family will share, and when that comes about our patient is in a bad way.

It is asked then, in the name of common sense what can we do for the patient with an acute abdomen? The answer from a therapeutic standpoint is a definite and final "Nothing whatever."

The patient that survives our purgatives is fortunate indeed and does so in spite of them. The patient suffering with a condition so trivial as to be relieved by a movement of the bowels has very little or nothing the matter anyway, but if you feel you must move the bowels by all means confine your efforts to an enema and if that does not move them, they do not need to nor should they move at that time.

Nature fairly well directs the way we should pursue. The proper posture is probably the most beneficial of the things to be done. Elevate the patient to a semi-reclining position, flex the knees supported with pillows or folded blankets, keep flat on back, or if condition suspected of being right-sided, patient may be slightly turned to the right for rest and supported in that posi-

tion. Under no circumstances should he be turned to the left if it is likely the trouble is on the right. Hot or cold applications, if not too heavy, may have a soothing effect. Narcotics, in moderate dosage and frequency with due regard for what has been said, is in order. If not nauseated, frequent small drinks of water are permissible and probably advisable, as it will tend to dilute the toxins and maintain the body fluids, but this should be withdrawn at the first evidence of nausea. Nor should anything but water be given by the mouth.

Consult a surgeon early, and if the patient is to be transported, maintain as nearly as possible the position described above, and, *Gentlemen*, it is believed that when this has been done we will have performed our *duty well*.

SUMMARY

The fine points such as differential blood count, focalization, etc., have been purposely passed over. They would confuse the main question and are for the surgeon to determine. The simplicity of symptoms and the very few extra-abdominal conditions to be ruled out of the picture would make it seem incredible that we should see so often cases coming to operation with a general peritonitis or ruptured appendix, or gall bladder.

NOTICE!

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of the

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THE RECENT REDUCTION IN THE STATE HEALTH APPROPRIATION

During the next two years it will be necessary for the State Board of Health to curtail activities owing to the reduction of the health appropriation by the recent legislature. The details of this curtailment are presented in an editorial appearing in the September issue of *Health Notes*, the official monthly bulletin of the State Board of Health. For example, during the year 1926 more was expended for vaccine virus alone than the 1927 appropriation allows for all biologics. Of the personnel five medical officers, four nurses, one assistant engineer and four sanitary inspectors have been dropped.

It seems incomprehensible that an intelligent group of men would fail to foresee the vital necessity of maintaining the same efficient health department that has functioned in this state for

many years. Can it be that our legislative bodies have been unmindful of the fact that an official health department has been the foundation of Florida's development? Disraeli said, "The care of the public health is the first duty of the statesman. God give us a statesman."

RECENT LEGISLATION CONCERNING ESTABLISHMENT OF COUNTY HOSPITALS

During the last session of the Florida Legislature, Senate Bill No. 10 was passed and approved by the governor on April 23, 1927. This is an act which enables certain counties to establish county hospitals. It affects only those counties which showed a population of from thirty to sixty thousand inhabitants according to the 1925 census. These counties are Alachua, Escambia, Jackson, Orange, Palm Beach, Pinellas and Volusia.

The bill specifies that the Board of County Commissioners shall submit the question to a vote when petitioned by five hundred voters from that county. Bonds may also be voted and a tax assessed for the support and maintenance of the County Hospital. The act provides for the creation of a Board of Hospital Trustees and specifies their duties.

The provisions of the act designate the hospitals as institutions to take care of both charity and pay patients.

The attention of the Medical Societies in the counties affected by this act is directed to the provisions. It is suggested that the matter be discussed at the meetings of County Medical Societies with the view of determining the need of such an institution in their counties.

Palm Beach has already organized and plans to have a County Hospital if a bond issue can be obtained at the next election. Any support that can be given to this project by organized medicine will doubtless repay the effort many times over, through the increased conveniences and added facilities for proper medical care of private patients.

THE ROLE OF THE ROENTGEN RAY IN MODERN DIAGNOSIS

Naturally the first general medical use of X-rays was in connection with injuries and diseases of bone. The limitations of early apparatus, electrical and photographic, were such that it was largely used for examination of bone lesions only. Study of internal organs as kidneys came later with improvements in equipment.

This early misconception of its possibilities gained such recognition in the mind of the medical profession that some practitioners still feel that the greatest usefulness of the X-ray lies in the field of bone diagnosis. To say that roentgenological aid is of importance in the diagnosis of every chronic ailment, and many acute ones, would be too strong a statement. Unfortunately, the public still credits the X-ray with almost unlimited diagnostic powers, and patients often present themselves for "X-ray examinations" of conditions in which roentgenology can be of little or no assistance. Few patients refuse an X-ray examination when it is indicated. More often they will demand it when it is not indicated.

The proper relation of the roentgenologist, in the truest sense, is that of a highly developed medical consultant. His report should forge just another link in the diagnostic chain. Starting with bone conditions, the X-ray field in diagnosis has enlarged to where at present it has an important bearing on the diagnosis of all the diseases of the lungs and pleura, most forms of heart and aortic disease, practically all gastrointestinal disorders, including gall-bladder disease, a large percentage of all chronic diseases of the kidneys, most of the chronic disorders of the ears and nose, and practically all so-called focal infections.

There is no question but that with the development of new methods the field will enlarge. Such examples as air injection into the ventricles of the brain in diagnosing brain lesions, and the recent dye work in gall-bladder diagnosis illustrate this. Mention might also be made

(Continued on page 194)

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of the injection of various body cavities with lipiodol by the French which has thrown so much light in many obscure lesions.

The roentgenologist must remember that he is a member of a clinical group composed of other highly trained specialists, surgeons, and physicians. Conservatism should always be his guide.

There should be no need to emphasize to any physician that roentgenology is a medical specialty and can no more be carried on accurately by a layman than could, for instance, the treatment of diseases of the nose and throat. The possession of an X-ray machine no more makes a roentgenologist than the ownership of a violin makes a musician. A working knowledge of photographic technique certainly carries with it no knowledge of anatomy or pathology.

THE EYES OF SCHOOL CHILDREN

Available statistics reveal that countless children enter school each year greatly handicapped by defective vision. Most of the visual defects are correctable. Millions of school children are retarded in their studies by defective eyes and this condition is in many instances being disregarded by educational authorities. Simple visual acuity tests in given areas reveal that twenty-five per cent of school children in public schools have defects of vision and symptoms of eye strain. Many of these defects become progressively worse if not corrected; for example, certain types of myopia if uncorrected rapidly increase and eventually produce partial or total blindness. Strabismus is frequently allowed to go uncared for with loss of vision in the squinting eye being the end result. Astigmatic errors are allowed to go uncorrected with the child becoming a nervous hysterical wreck. Such visual tests as are made in our schools are frequently a mere matter of routine with no manifest interest in seeing that the child is given the proper attention. Every child of the school age should be subjected to simple visual tests and eye examination. The need of this is a matter of education of the parent by our general practitioners.

STATE NEWS ITEMS

At the meeting of the Palm Beach County Medical Society held September 12th, Dr. Jay A. Powell read a paper on "Endocervicitis."

(Continued on page 196)

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The Florida hospitals recently approved by the American College of Surgeons are as follows: Duval County Hospital, Jacksonville; Riverside Hospital, Jacksonville; St. Luke's Hospital, Jacksonville; St. Vincent's Hospital, Jacksonville; Pensacola Hospital, Pensacola; Florida East Coast Hospital, St. Augustine; Flagler Hospital, St. Augustine; Faith Hospital, St. Petersburg; Bayside Hospital, Tampa; Tampa Municipal Hospital, Tampa; Good Samaritan Hospital, West Palm Beach; U. S. Marine Hospital No. 10, Key West, and the Veterans' Bureau Hospital, Lake City.

* * *

Dr. Frederick J. Waas and daughter, Miss Catherine Waas, left recently for Detroit where Dr. Waas will attend the meeting of the American College of Surgeons. From there they will go to Canada for a visit. Dr. Waas expects to visit Rochester and other points in the east and north.

* * *

The American Board of Otolaryngology will hold an examination in Memphis the first day of the Southern Medical Association meeting, Monday, November 14th, 1927. Those desiring to take the examination should communicate with Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, Nebraska.

* * *

Dr. Eugene B. Elder, formerly superintendent of the Georgia Baptist Hospital in Atlanta, is now superintendent of the Morrell Memorial Hospital at Lakeland, having assumed his duties there on August 30th.

* * *

Dr. Frederick Bowen of Jacksonville returned home recently after a short visit with his daughter, Mrs. Ward Preston, of Lake Keuka, N. Y.

* * *

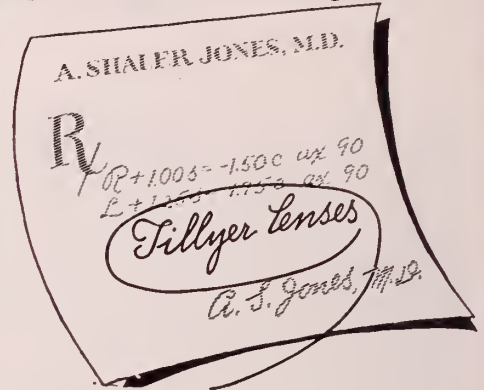
The citizens of Stuart recently approved a bond issue of \$30,000 for the construction of a new municipal hospital. It is planned to have actual construction of the building started in the very near future. It is proposed to build the hospital on the unit plan.

* * *

Dr. Grace Whitford of Ozona and Mrs. Y. M. Beazley of Tampa, who recently returned from a month's trip to the mountains of North Carolina and Washington, D. C., spent a few days in Jacksonville as the guests of Mrs. Vida Lester MacDonell en route home.

(Continued on page 198)

To Oculists—



This precaution assures accuracy and clarity!

Write the seven-letter word, "Tillyer," on your prescription and an accurate interpretation of its orders into *optical glass* is assured. There is but one Tillyer method, known throughout the optical world as producing lenses corrected for both astigmatism and power.

Tillyer lenses duplicate *in glass* the accuracy of your prescription on paper, because each individual Tillyer lens is ground with special tools for its power, having its own base, its own curve, its own shape—to supply *complete* accuracy in its power. A Tillyer lens is polished to the perfect finish of fine astronomical lenses.

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The Pasco-Hernando-Citrus County Medical Society held its regular monthly meeting in the offices of Dr. George A. Dame in Inverness, September 15th, with the following present: Drs. A. C. Coogler, W. Hancock, Jr., George Creekmore and Furlow, Brooksville; Drs. George McGregor and T. F. Jackson, Dade City; Dr. Bradshaw, San Antonio; Drs. Hiram Byrd, Patterson and McMurray of Tampa and Drs. George A. Dame and James F. Miller of Inverness. Preceding the regular meeting, Dr. Dame entertained his colleagues at dinner at Johnston's cafe. It was planned to hold the following meeting with Dr. W. B. Moon of Crystal River on Tuesday, October 4th.

* * *

Dr. J. L. Hargrove, superintendent of the County Hospital at Bartow, was married on October 5th to Miss Mary Waldo of Bartow.

* * *

Dr. A. H. Aber of St. Petersburg has recently returned from Pittsburgh, where he has been doing special work in internal medicine at the University of Pittsburgh.

* * *

Dr. Harold D. Van Schaick of Jacksonville is spending some time in Cleveland, Chicago, Rochester and other clinics of the north.

* * *

At a meeting of the Lake County Medical Society held September 1st, Dr. C. J. Collins of Orlando was present by invitation and read a paper entitled "Modern Treatment of Eclampsia."

* * *

Dr. and Mrs. M. A. Lischkoff recently returned to Pensacola after an absence of two months in Chicago, Detroit and the west, including Yellowstone Park. While in Detroit Dr. Lischkoff attended the thirty-second annual meeting of the American Academy of Ophthalmology and Otolaryngology.

* * *

Dr. William Y. Sayad announces the removal of his offices from 208 Da-na-ra Arcade to 1215-18 Harvey Building, West Palm Beach.

* * *

The City Hospital of Bartow will be completed and ready for occupancy this month.

(Continued on page 200)

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2% SOLUTION

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BROOK HAVEN MANOR stands for all that is best in the Care and Treatment of these patients and the correction of Maladjustments, Faulty Habits of Thinking, Personality and Behavioristic Disorders. The atmosphere of a large country home is studiously maintained.

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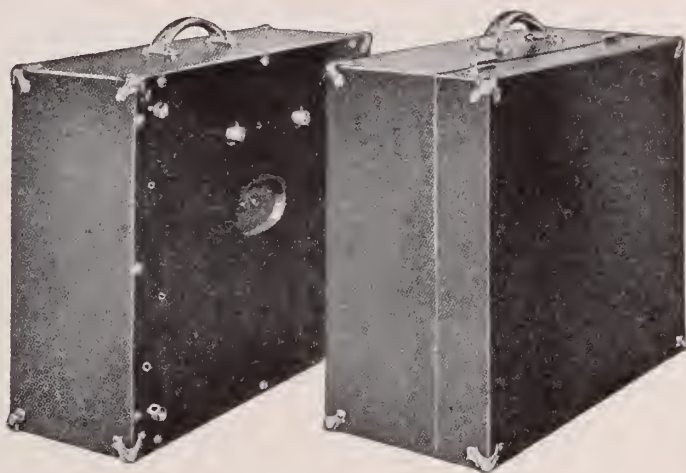
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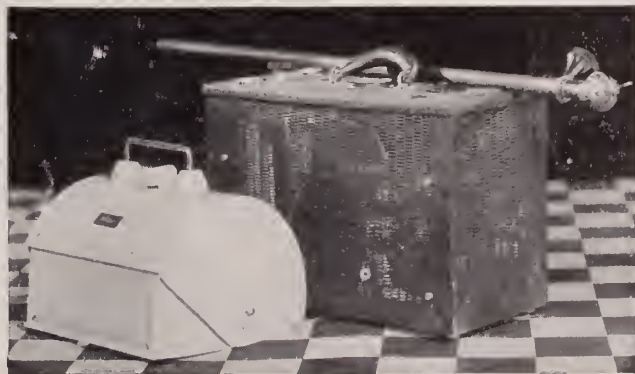
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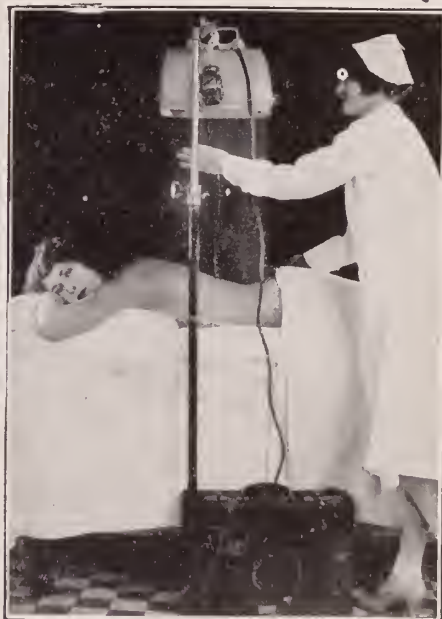
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Portable Air-Cooled Ultra Violet Lamp

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Kindly give me full particulars on:
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Portable Quartz Light

Dr.

Address

Dr. G. C. Tillman and family of Gainesville returned recently from New York and Canada.

* * *

Dr. James L. Carlisle of West Palm Beach and Miss Katherine Fogarty were recently married at West Palm Beach.

* * *

Dr. R. L. Hughes of Bartow is spending a two months' vacation in Atlanta and Rome, Georgia.

* * *

Dr. and Mrs. William D. Lithgow and son David of Miami spent the month of September in the mountains of North Carolina and Pennsylvania. Dr. Lithgow visited Dr. L. M. Anderson of Lake City while on his way north.

* * *

The Sarasota County Medical Society and the Sarasota County Dental Society recently held a joint meeting. A well-arranged dinner preceded the scientific meeting. Dr. A. O. Morton, president of the County Medical Society, presided. Papers were presented by Paul Sanders, D.D.S., Frank C. Metzger, M.D., and Chris Constantine, D.D.S. The speakers confined their papers to diseases of mutual interest to the medical and dental professions.

* * *

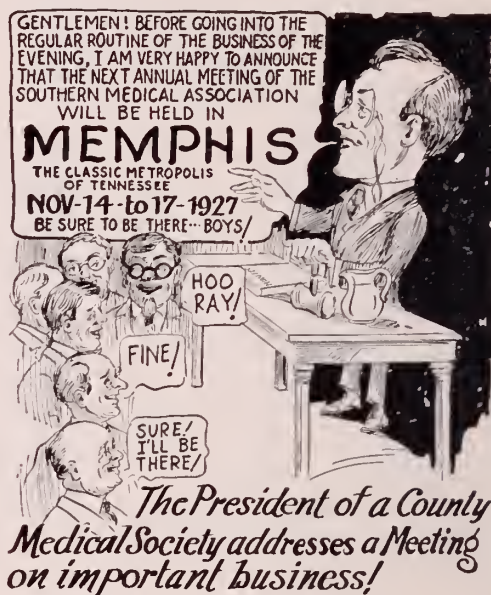
Dr. L. M. Anderson of Lake City was a recent visitor in Jacksonville. Dr. Anderson was a delegate to the Regional Institute of the Florida Public Health Association.

W. S. GRAMLING

Dr. W. S. Gramling, 55, a resident of Miami for twenty-seven years, died September 8th, at Battle Creek Sanitarium, Battle Creek, Michigan. Dr. Gramling was born in Greenville, Alabama, and graduated from the Alabama Medical College. He came to Miami to practice medicine in 1900 and carried on his work until a year ago when he retired from active life. For several years, Dr. Gramling served the state and his profession as a member of the Florida State Board of Medical Examiners. During the World War he was stationed at Camp Gordon, Atlanta, Georgia, where he served as a surgeon. He was a member of the Florida Medical Association and the Dade County Medical Society. Mrs. Gramling, a son, Sanders, and a brother, John C. Gramling, are sole survivors.

H. C. BABCOCK, M.D., Necrologist.

(Continued on page 202)



MEDICINE and SURGERY in its every phase will be brought right down to NOW in the general sessions, the eighteen sections and conjoint meetings, and the clinics, making up the annual activity this year. Golf and trap shooting for those who love these sports—bring the clubs and guns. Alumni reunions—meet your old pals. Entertainment for all and something special for the ladies—bring the wife. A well rounded meeting, complete in every detail—Memphis, Tennessee, November 14-17, 1927.

ARE YOU A MEMBER of the Southern Medical Association? If not, you should be and can be if you are a member of your county and state medical societies—that is the only necessary requirement, plus \$4.00 for annual dues, which include the Association's own Journal, the *Southern Medical Journal*, each month.

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This combination of a concentrated food of proper balance, high caloric value, which is readily digestible and completely assimilable is available to the Pediatrician in DRYCO, the safe milk in powder form. By virtue of the fact that the quantity of water may be diminished, a concentrated diet of high caloric value may readily be obtained. The fineness and softness of the DRYCO curd assures its maximum assimilation and absorption with a minimum of digestive effort. In view of its palatability *marasmic* infants readily adapt themselves to DRYCO, showing at the same time, a marked improvement in appetite and weight.

CLINICAL DATA AND
SAMPLES UPON REQUEST

THE DRY MILK COMPANY

15 PARK ROW :: :: NEW YORK CITY

Dr. N. L. Spengler of Tampa recently returned from a vacation trip to Canada and other points in the north.

* * *

Dr. J. Lunsford Boone of Jacksonville and Miss Elizabeth Conradi of Tallahassee were recently married at Montreat, North Carolina. Following the wedding, Dr. and Mrs. Boone spent their honeymoon in the mountains of North Carolina, only recently returning to Jacksonville where they will be at home to their friends at 1609 Mallory Street.

* * *

Dr. Louie Limbaugh of Jacksonville has recently returned from a stay of several weeks in Baltimore where he spent much time in clinical work.

* * *

Dr. E. T. Sellars and family of Jacksonville recently returned from a motor trip to Kentucky.

* * *

Dr. and Mrs. G. H. Carefoot and son George, Jr., of Ft. Meade recently returned from Asheville, North Carolina, where they spent a two months' vacation.

* * *

THE DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY HAS REPORTED 100% OF 1927 MEMBERSHIP DUES PAID. CONGRATULATIONS TO THIS TRI-COUNTY SOCIETY.

* * *

Dr. N. M. Heggie of Jacksonville recently attended the meeting of the American College of Surgeons held at Detroit.

* * *

The Duval County Medical Society met at the Duval County Hospital, Jacksonville, Tuesday, October 4th. The scientific program was interesting and enjoyed by all. Dr. J. D. Love read a paper on "Some Common Pediatric Errors" and Dr. Robert M. Baker read a paper on "Intravenous Administration of Mercurochrome in Acute Gonorrhea." Dr. N. A. Upchurch of the City Board of Health and Dr. Parker discussed the milk situation in Jacksonville and asked the Society to give its support to certain legislative matters pending in the City Council.

* * *

Dr. R. E. Wilhoyt of Lake Wales and family have returned from a month's vacation visiting friends in Kentucky. (Continued on page 204)

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For Excessive Armpit Perspiration

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and removes the cause—exces-
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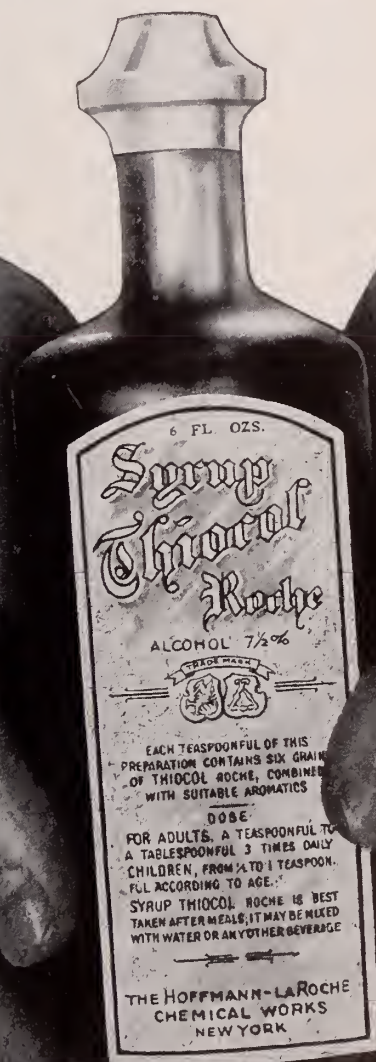
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*A sedative expectorant that exerts a beneficial effect on the
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6-OUNCE BOTTLES

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we suggest 2
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Accepted**The Hoffmann-La Roche Chemical Works**

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Never advertised
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Dr. L. W. Cunningham, Jacksonville, has returned from the twenty-eighth annual meeting of the American Roentgen Ray Society held September 20th-23rd. The Society, which takes its active membership from roentgenologists of the United States and Canada, met this year for the first time in Canada, the meeting being in Montreal.

* * *

Dr. H. C. Babcock of Miami has just returned from the north where he visited clinics at Rochester, Minn., New York City and Baltimore.

* * *

Dr. Joseph Halton of Sarasota has recently returned from a three weeks' sojourn in Europe.

* * *

Dr. Donald T. Babcock of Miami recently returned from a vacation spent in the mountains of North Carolina.

* * *

Dr. Chas. B. Mabry of Jacksonville has returned from Montreal, North Carolina, where he served as best man to Dr. J. Lunsford Boone, Jacksonville, who recently married Miss Elizabeth Conradi of Tallahassee.

* * *

Dr. and Mrs. Herman H. Harris of Jacksonville recently returned from a trip abroad. Dr. Harris attended the meeting of the American Legion held in Paris and visited a number of European clinics.

* * *

Dr. H. Mason Smith of Tampa was a recent visitor to Jacksonville, attending a meeting of the State Board of Health, of which he is a member.

* * *

Friends of Dr. and Mrs. H. P. Newman of Bartow will regret to know that Mrs. Newman is a patient in the Wesley Memorial Hospital in Atlanta, but pleased to learn that she is well on the way to a complete recovery.

* * *

The sixth annual meeting of the Southern Association of Anesthetists will be held at the Claridge Hotel, Memphis, Tenn., November 14th and 15th.

Among the interesting papers on the program for the coming meeting at Memphis are:

"The Chemistry of General Anesthetics," Drs. J. S. Lundy and A. E. Osterberg, Rochester, Minn.

(Continued on page 206)



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ATLANTA, GEORGIA

A modern neuropsychiatric hospital with special laboratory facilities for the study and treatment of early cases. Also a department for the treatment of drug and alcoholic addictions.

The Sanitarium is located on the Marietta Electric Car Line, ten miles from the center of Atlanta, near Smyrna, Ga. The grounds comprise 80 acres. The buildings are steam heated, electrically lighted, and many rooms have private baths.

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"Nitrous-Oxid in Obstetrics and the Resuscitation of the Newborn," Dr. Walker B. Gossett, Louisville, Ky.

"Nasal Surgery under Ether-Oil Colonic Anesthesia," Dr. Edley H. Jones, Vicksburg, Miss.

"Indications and Contra-Indications of Ether-Ethylene Nitrous-Oxid in Major Operations," Dr. Nettie Klein, Texarkana, Texas.

"Surgery and Anesthesia in Diabetics," Dr. J. G. Sherrill, Louisville, Ky.

"Minimizing the Fire and Explosion Hazard in the Administration of Anesthetics," Dr. J. G. Poe, Baylor Hosp., Dallas, Texas.

Any one interested should communicate with W. Hamilton Long, Secretary, Francis Bldg., Louisville, Ky.

* * *

The Palm Beach Academy of Medicine held its regular bi-monthly meeting on the evening of Wednesday, September 28th. The Academy was honored by having addresses by Drs. Calvin D. Christ, Spencer A. Folsom, and Lewis Orr, of Orlando. The subject of Dr. Christ's paper was: "Appendiceal Abscess in the Left Pelvis Fornix." Dr. Folsom's paper was entitled: "Resume of Medical Literature on Diabetes Mellitus, from July, 1926, to July, 1927." Dr. Orr reported in detail the diagnosis and management of a rare form of renal tumor, his subject being: "Spindle-Celled Sarcoma of the Kidney." Dr. W. E. Van Landingham, president of the Academy, expressed the appreciation of this body to the visiting gentlemen for their courtesy in appearing before it, and stated that the Academy always welcomed such distinguished visitors. Visiting physicians from several towns along the East Coast were present to hear these papers.

* * *

Dr. Banks H. Goodale of Jacksonville will spend several weeks in Rochester, Minn., attending the Mayo clinic.

* * *

Dr. and Mrs. Horace Williams of Tampa motored to Tallahassee recently where their daughter is a student in the State College for Women. On their return, they spent some time in Jacksonville and Palm Beach.

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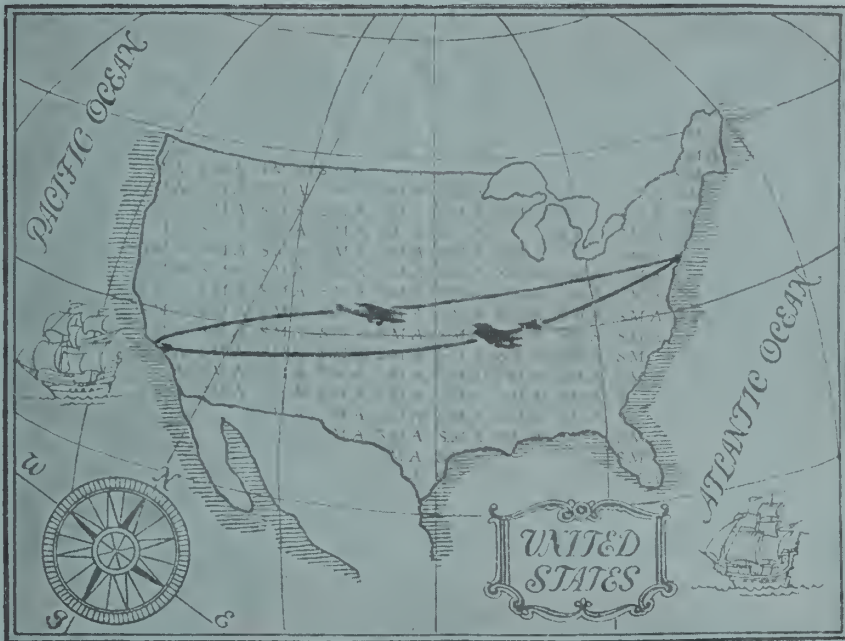
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| { | 1—It resembles breast milk both physically and chemically. | } |
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| | 4—It gives excellent nutritional results in most cases and in addition these results are obtained more simply and more quickly. | |
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NEW YORK, N.Y.

THE JOURNAL

—OF THE—

Florida Medical Association, Inc.

OWNED AND PUBLISHED BY THE FLORIDA MEDICAL ASSOCIATION, INC.

VOLUME XIV
NO. 5

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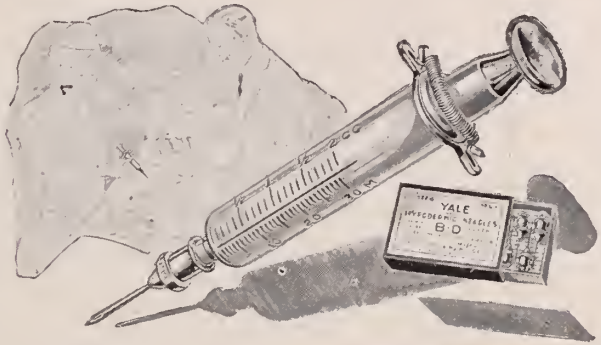
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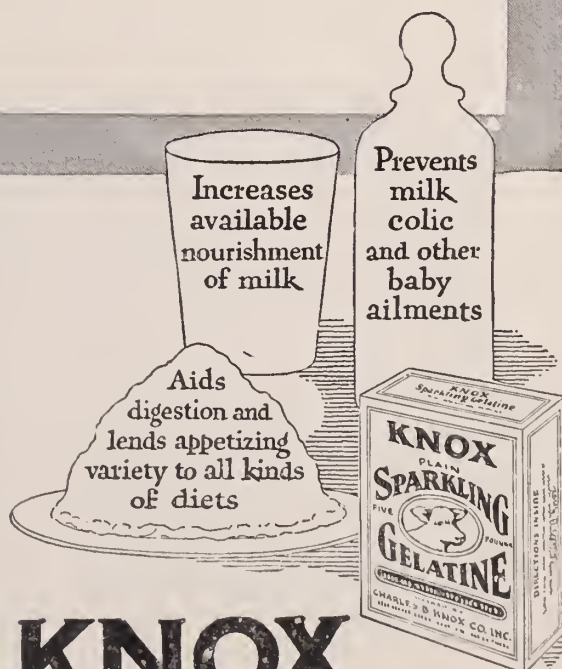
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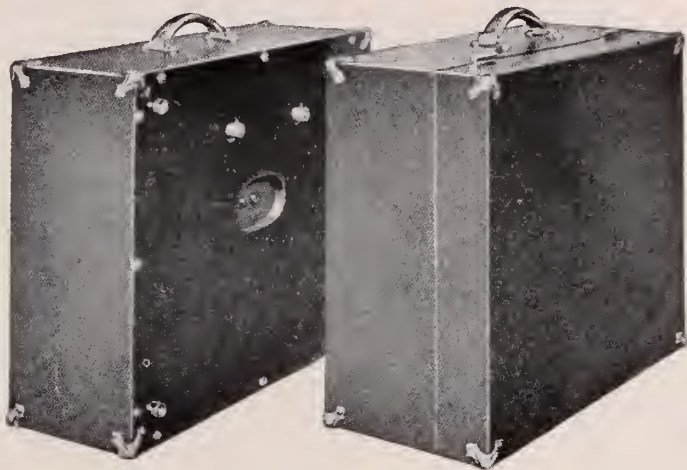
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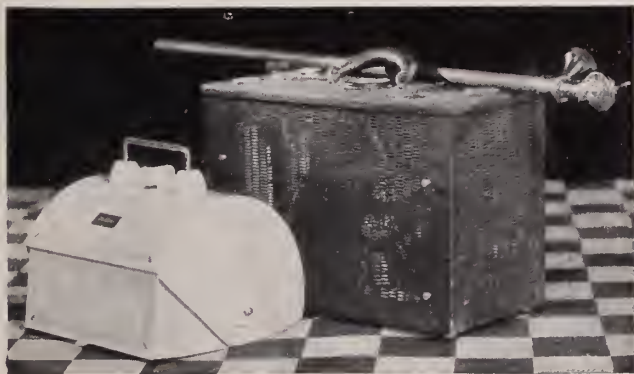
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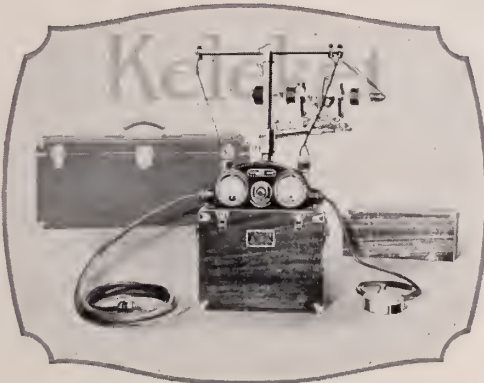
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*Extract from the August, 1927, issue
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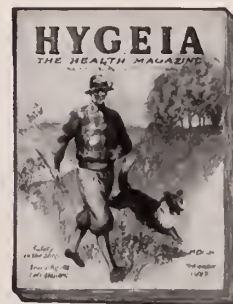
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PUBLISHED MONTHLY

Volume XIV

Jacksonville, Florida, November, 1927

Number 5

CAUDAL BLOCK ANESTHESIA*

A REPORT OF 114 CASES

LEIGH F. ROBINSON, M.D., F.A.C.S.,
Ft. Lauderdale.

Though caudal anesthesia is a subject that is being generously considered in current medical literature, it may prove valuable to report the results obtained in a series of 114 cases of operative surgery. These cases are from my own practice, operated on in my office and at the following hospitals in the Dominican Republic: La Humanitaria, La Vega, Evangelical, Santo Domingo City.

Caudal anesthesia must be distinguished from spinal anesthesia. It is extradural and does not carry with it the grave risks of the latter. It is accomplished with a single injection into the sacral canal through the sacral hiatus. Its use may be extended by the addition of infiltration and parasacral anesthesia. In herniotomy and suprapubic operations on the bladder and prostate, it usually is necessary to employ some infiltration of the skin. Operations on the perineum and external genitalia may be done painlessly with the single injection into the sacral canal. The small percentage of failures may be further reduced by injecting through the four upper sacral foramina.

Cathelein was the pioneer of the method and in 1900 used it successfully in operations on the perineum and in obstetrics. Lowen, in 1910, established it as a practical means of producing anesthesia. Since then the literature has received numerous contributions from all parts of the world.

As Mummey states: "The restricted use is due to the comparatively few men who are apt in technique. Conservative tendencies are very prominent among the various causes which retard the introduction and use of a little used method. All ranks of the American public are entirely convinced and accept the fact that they must be 'put to sleep' before any surgical major operation of any importance can be executed. On the other hand, the Mayos claim that 80%

of the general surgery can be done under local anesthesia."

This series consists of 114 consecutive cases operated upon with 11 failures. All cases where it was necessary to add general or local anesthesia were considered failures. The percentage of failures was about 10%. It is generally agreed that the failures are due to improper preparation, faulty technique, the amount of anesthesia used, starting operation too early after injection of anesthetic, and employing the method in those conditions of operative surgery that are illogical for its use. With these principles in mind the following routine was established:

Preparation: Patients for operation at 8:00 a. m. are given a light supper and no breakfast. A cleansing enema is ordered for 6:00 p. m. and 6:00 a. m. Morphine sulphate subcutaneous injection grain $\frac{1}{4}$ is given at 7:00 a. m. If patient is of nervous type, hyosine hydrobromide grains 1/150 is added to the morphine. There is no hesitation in giving more morphine if it is indicated.

Technique: For the anesthetic a 1% solution of procaine is used, to which is added about five drops of 1/1000 of adrenaline solution to each 100 c.c. This is injected into the sacral canal with a long spinal needle fitted with a stylet. Since about thirty minutes are required for the injection to take effect, it may be given before patient is taken from his room. With the patient lying on his stomach and a pillow under his hips, the sacral hiatus is located by passing the left forefinger along the midline of the back to the depression between the juncture of the coccyx with the sacrum and the fourth sacral spinous process. In the center of this depression, the skin is anesthetized by raising a wheal, through which the spinal needle, held at an angle of 20 degrees, is forced through the sacrococcygeal membrane to the anterior wall of the canal. It is withdrawn slightly, the distal end depressed until its angle is about 40 degrees, where it then easily enters the canal, usually for a distance of about two inches. The stylet is withdrawn and if there is no sign of spinal fluid or blood the solution of procaine is injected slowly. The quantity ranges between 30 and 100 c.c. and de-

*Read before the Fifty-fourth Annual Meeting, Florida Medical Association, West Palm Beach, April, 1927.

pendes on the amount of resistance encountered after the first 30 c.c. A variable quantity of fluid is necessary because of the variation in the capacities of sacral canals. As a rule, success depends on one's technic. The literature has already liberally discussed technic and I shall not go further into that subject. With a little experience one soon learns to judge when the needle enters the sacral canal and when enough fluid has been injected to fill its capacity.

The anesthesia should be complete for the external genitalia, perineum, anus, prostate, rectum, ischiorectal fossa, vagina, cervix, bladder and urethra.

No reactions of importance were observed. Occasionally an increase in the pulse rate and labored breathing was complained of. These symptoms cleared up without treatment. They were noticed soon after the injection was begun and, if the injection was delayed a few moments disappeared.

LIST OF OPERATIONS.

	No. of Oper.	Failures.
1. Amputation of cervix	4	2
2. Colporrhaphy	14	0
3. Cystoscopic examinations for bladder and renal conditions.....	30	0
4. D and C	2	1
5. Excision for fistula in ano	7	1
6. Hemorrhoidectomy (C and C)	24	4
7. Herniotomy (inguinal)	3	1
8. Plastic repair urethra	2	0
9. Plastic vesicovaginal fistula	1	0
10. Plastic old complete laceration peri- neum	1	0
11. Prostatectomy (perineal)	1	0
12. Stricture anus	1	0
13. Suprapubic cystotomy	2	1
14. Urethrotomy—(a) External	7	0
(b) Internal	3	0
(c) Internal-external..	9	0
15. Watkin's interposition operation for prolapsed uterus	3	1
Total	114	11

CONCLUSIONS.

Caudal anesthesia is a safe and convenient anesthetic for office and hospital use.

The method is simple and is not attended with serious complications.

Supplementary general or local anesthesia is not contraindicated in cases of failure.

Its field of use may be greatly increased by supplementary local and transsacral anesthesia.

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DISCUSSION

Dr. C. Panettiere, Miami Beach:

I am very glad to hear a discussion on sacral anesthesia. I believe it has a definite place in surgery, in cases where a general anesthetic is out of the question. I had occasion to use this a few days ago in a case where a supravaginal hysterectomy was done under sacral anesthesia. However, I prefer the use of 2% novocaine solution instead of the 1% suggested by Dr. Robinson. As far as the administration of adrenalin in conjunction with novocaine is concerned, I think that that also is a matter of choice. Various reports of this have been given; some believe that adrenalin prolongs the period of anesthesia. I have not been able to detect any definite difference. I would like to hear the question discussed further.

Dr. C. D. Christ, Orlando:

The Doctor didn't make it very clear in his paper about the adrenalin. He said five drops of adrenalin but not how much of the solution. I think five drops of adrenalin to 100 c.c. of solution is about the proportion that should be used. If you give five drops of adrenalin with 30 or 20 c.c., you are liable to get some adrenalin effects.

Dr. Maurice Heck, DeLand:

It is not quite clear to me whether or not the Doctor limited the injection to the caudal foramen or whether the lateral foramina are included as well, and if not the lateral, is this an advantage over the operation which includes the lateral foramina?

Dr. H. D. Van Schaick, Jacksonville:

Caudal analgesia has deservedly won a lasting

place in surgery. However, unless there is some very definite indication for its use, such as urological work, cardiac or renal complications, etc., it should not supplant general anesthesia.

After the patient has had a thorough medical and surgical study and has been seen preoperatively by the trained anesthetist who selects the type of anesthesia for that particular case, I doubt the mortality, after excluding the above mentioned special indications, will be changed by a fraction of a per cent by the use of inhalation anesthetics.

It is well known that the closer the central nervous system is approached by anesthetic injection, the more profoundly and frequently reaction occurs. It is most disconcerting to have a fall in blood pressure with the coincident demoralizing and unusual sensations experienced by the patient which he makes known in no uncertain manner. These reactions happen during the injections for the most minor of surgical procedures.

It has been shown that after injecting 35 c.c. of solution into the sacral canal, traces will be found as high as the mid-dorsal region. As 35 c.c. of 1% or 2% solution is commonly used, I have of late used 15 to 18 c.c. of 3% novocaine. The use of the smaller amount gives good anesthesia and fewer reactions.

Dr. L. F. Robinson, Ft. Lauderdale, closing:

I am certainly pleased to hear the liberal discussion. My main idea was to emphasize the place caudal anesthesia has in surgery.

Answering Dr. Christ, the rule is to give 5 drops of adrenalin to 100 c.c. of solution. I must have omitted that in reading the paper.

Dr. Heck, I refer to the single injection through the sacral hiatus.

There is no doubt that the nervous condition of the patient will frequently cause a psychic failure and the more severe types of these patients should not be selected for caudal anesthesia.

ROENTGENOLOGIC EXAMINATION OF THE UPPER ABDOMEN*

FREDERICK K. HERPEL, M.D.,

West Palm Beach.

Roentgenologic examination has become an essential part of a complete examination of

many patients. In bone and joint injuries such examination has become routine. The information so obtained is valuable in diagnosis, is an aid in outlining correct treatment, and is a means of following the results of treatment. Few physicians fail to recognize the value of roentgenologic examination in such cases. Likewise, largely because of the accumulated experience gained by thousands of chest examinations by the roentgen ray during and after the recent World War, a thorough chest examination includes the use of the roentgen ray.

This general appreciation of the value of roentgenologic examination in bone and joint conditions, and in the field of chest conditions, does not extend in the same degree to roentgenologic examination of the abdomen in the differential diagnosis of abdominal pain. This lack of appreciation of the value of roentgenologic examination of the abdomen is due, I believe, to lack of knowledge concerning its possibilities and limitations. Many of you are as familiar with this field as I am. I ask your patience if I repeat what you have heard many times, and have found out in your own experience. There are others here, however, to whom a general survey of this important field may be of some value in pointing out some of the possibilities and limitations in roentgenologic differential diagnosis of conditions in the upper abdomen.

Epigastric or upper abdominal distress or pain is a common early symptom in many intraabdominal pathological conditions. It is also a symptom in some conditions located in the lower abdomen, and in conditions outside the abdominal cavity. Referred pain or distress in the upper abdomen may be expected in most intraabdominal conditions.

In an examination of the upper abdomen one must consider the diaphragms and subdiaphragmatic spaces, the liver, gall-bladder and bile ducts, the spleen, the kidneys, the suprarenal glands, the pancreas, the stomach, duodenum and upper jejunum, the hepatic and splenic flexures of the colon, the transverse colon, at times the sigmoid colon, the omentum and mesentery, the retroperitoneal glands, the abdominal aorta, certain other blood vessels, and the abdominal wall. The field to be examined is, therefore, quite large.

Several methods are employed in roentgenologic study of the upper abdomen. Roentgeno-

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grams only may be made, either single or stereoscopic. This is applicable in examinations of the liver, spleen, kidneys and diaphragms. By this method one can demonstrate graphically the diaphragms, the size, outline and position of the liver, spleen and kidneys. A certain percentage of gall-bladder and renal and ureteral calculi can be shown by roentgenographic examination, but not all. It is usually necessary to employ, in addition to the film examination, roentgenoscopy or screen examination.

For a complete roentgenologic examination of the gastrointestinal tract one must use some form of opaque meal which, introduced into the stomach, will fill and outline it and the tract beyond. Barium sulphate and buttermilk, or barium sulphate, malted milk and water, are quite commonly employed.

Before I proceed to the discussion of what can be done with an opaque meal, may I discuss briefly the preliminary preparation of the patient. This is often neglected. The intestinal tract should be cleared by catharsis 36 to 48 hours prior to the beginning of the examination, so that peristalsis will have returned almost to normal. If this time interval is not possible, a cleansing enema may be given prior to examination. The stomach must be empty. This usually means a fasting interval of at least twelve hours.

A combined fluoroscopic and film examination is absolutely essential in roentgenologic examination of the gastrointestinal tract. If one portion of the examination must be omitted, it should certainly not be the fluoroscopic portion. A brief fluoroscopic survey of the chest, paying particular attention to the heart, the thoracic aorta, the diaphragms and costodiaphragmatic angles, the lungs, and the mediastinum, will often reveal interesting abnormalities and pathological conditions directly bearing on the patient's condition. A limited diaphragmatic excursion on the right side may direct attention to the subdiaphragmatic space, and to the liver, and it may be a valuable sign in the diagnosis of a retrocecal appendicitis.

Observation of the oesophagus during the passage of the opaque meal will demonstrate points of abnormal narrowing, or filling defects, and may demonstrate a cardiaspasm. A carcinoma of the lower oesophagus or the extreme upper end of the stomach may be easily missed

if the passage of the opaque meal is not watched carefully.

The manner of gastric filling by the opaque meal is important in the determination of stasis in the fasting stomach, of gastric tonus, and of certain spastic contractions of the gastric wall. The position, contour, mobility and peristalsis are determined, both in the upright and the prone positions. The relative position of the stomach will vary with the type of individual being examined. The tall, thin patient will have a low positioned, orthotonic or hypotonic stomach, fish-hook shaped. The short, heavy-set individual will usually have a relatively high-positioned stomach, orthotonic or hypertonic, steerhorn in shape. There are as many variations in size, outline and position as there are types of patients. The diagnosis of ptosis should not be made on position alone, but on position, tonus, dilatation, stasis after the normal emptying period and the presence of subjective symptoms. Perhaps nothing in roentgenologic diagnosis has been more abused, and been the subject of more adverse criticism, than the practice of diagnosing ptosis on low position of the stomach alone.

The normal stomach has certain curves, indentations and waves which are entirely normal. One must be able to recognize a normal appearance when he sees it. To the untrained eye there is little difference between the normal stomach and pathologic one. One must have a background of experience to appreciate what one sees on a film or during the course of a fluoroscopic examination.

Tumors, ulcers and adhesions may give alterations in gastric outline, depending upon their location and extent. Some of these can be demonstrated on the film. Others cannot be so demonstrated, and their recognition must depend upon a careful fluoroscopic examination. It is in the latter group, not demonstrable by film examination, that an accumulated experience and established technique in fluoroscopic examination counts so much. A film examination alone may be worse than useless. It may be actually misleading in its impression of negativity.

Filling defects, to be diagnosed carcinoma, tumor of benign character, diverticulae, or ulcer, must be constantly present, interrupting peristalsis, and causing alterations of size, peristalsis, tonicity and contour, depending on their location

and extent. Many gastric ulcers involve the prepyloric region or the pyloric itself, producing spasm of the pylorus and delay in gastric emptying, and later dilatation of the stomach. A five or six-hour examination, with a fasting interval following the ingestion of the opaque meal, is important in all stomach examinations. Perforation of an ulcer into the lesser peritoneal cavity may be recognized by the presence of a gas bubble and a fluid level above the stomach, and distinct from the shadow of the filled stomach. This is usually best recognized in the erect posture.

Contrary to our beliefs prior to the extensive use of the roentgen ray, duodenal ulcer is much more common than gastric ulcer. The typical history of duodenal ulcer may not be always present. In the duodenum the first portion, commonly called the cap or bulb, is the common site of ulcer. An irregularity of one side of the cap, with a spastic indentation on the opposing wall, persisting after saturation of the patient with belladonna (to relax smooth muscle spasm), gives one of the classic pictures in gastrointestinal roentgenology. Carcinoma of the duodenum is rare, and usually gives more extensive deformities and fixation by infiltration and adhesions. Jaundice should be a rather constant feature with duodenal malignancy.

The pyloric end of the stomach, and the duodenum, may be limited in mobility on account of adhesions, secondary to ulcer or to gall-bladder disease, or following operations on the right upper quadrant. Here one obtains a filling defect which can frequently be eliminated by pressure of the gloved hand, proving the extrinsic character of the defect. Filling of the gall-bladder by an opaque dye may be necessary to prove the role of the gall-bladder in the production of these adhesions.

There are also abnormal veils and membranes in the right upper quadrant which may give deformities of the stomach, duodenum and hepatic flexure region of the colon. These are probably anatomical abnormalities, though some may be due to chronic gall-bladder disease.

In the prone or supine position one may occasionally note an unusually wide sweep of the descending duodenum, with displacement upward of the pyloric end of the stomach and the duodenal cap, a valuable diagnostic sign in carcinoma and cysts of the head of the pancreas.

Other less common conditions which must be kept in mind are diverticulae of the stomach and duodenum, benign gastric tumors, syphilis and tuberculosis of the stomach. Diverticulum must be differentiated from penetrating ulcer. Benign gastric tumors present filling defects by the encroachment on the lumen. They present certain features whereby they may be reasonably accurately differentiated from malignant tumors. They are, however, often ulcerated and may give blood in the gastric test meal. They are often operable and removable. Inasmuch as syphilis of the stomach may produce extensive filling defects, it is advisable to make a Wassermann test for syphilis in every patient presenting extensive gastric filling defects. Syphilis can simulate many lesions.

The examination of the gall-bladder by means of a special dye (sodium-tetra-iodo-phenolphthalein), introduced only a short time ago, offers a valuable method of positively identifying many gall-bladders and is a valuable functional test of the contractility and emptying power of the gall-bladder, during fat digestion. This dye may be administered orally or intravenously. Where intravenous technique is excellent the latter method is more scientifically correct. The oral method, however, gives satisfactory results in the large majority of patients. Recently a preliminary report has been made of the use of a non-toxic dye, giving as good gall-bladder shadows as with the present dye, which can be given orally in solution. This would seem an ideal method of administration of the dye. A well-filled gall-bladder, smooth in contour, freely mobile, which empties within three to four hours after the ingestion of a meal rich in fats, is considered probably normal. One that does not fill with the dye, either by oral or intravenous administration, is pathological or the cystic duct is occluded or obstructed. Deformities of the gall-bladder, due to adhesions, can be demonstrated in many instances. At times calculi, not otherwise demonstrable, may be shown on films taken after dye administration, the dye having coated the calculi, rendering them more opaque to the roentgen ray.

In connection with gall-bladder examination I wish to stress the importance of at least a fluoroscopic examination of the barium filled stomach and duodenum, in conjunction with cholecystography. The frequency of associated

gastric and duodenal ulcer, and adhesions to stomach and duodenum, should make this procedure routine.

Pain in the right upper quadrant may be atypical. One may not demonstrate the pathology in the stomach, duodenum, pancreas or gall-bladder. In such cases the possibility of a retrocecal appendicitis should be kept in mind. Incomplete rotation and descent of the cecum and ascending colon may place the appendix beneath the liver, or posterior to the ascending colon.

One not infrequently notes evidence of irritation of the right diaphragm, and possibly a small pleural effusion at the right base, in such cases.

Lesions of the hepatic flexure, and splenic flexure of the colon may manifest themselves by upper abdominal pain. The opaque enema is necessary for their recognition and differentiation. Such lesions may be carcinomatous or tuberculous.

A not infrequent but striking condition is found when the apex of a redundant, much enlarged sigmoid loop rises high into the upper abdomen, and may cause filling defects of stomach, duodenum, gall-bladder, cecum and ascending colon by mechanical pressure. Here again the opaque enema is essential.

Tumors of the upper pole of the kidney, and of the suprarenal glands, may give displacements of the filled gastrointestinal tract, the nature of such displacement and defect depending upon the size and exact location of the tumor. Similarly enlarged retroperitoneal glands will give pressure defects, best detected in the films taken in the prone and supine positions. The epigastric distress seen with carcinoma of the prostate, or with certain tumors of the testicle, may be due to metastatic involvement of these glands.

Mesenteric and omental cysts have been recognized by a roentgenologic examination, sometimes demonstrable on films, at other times recognized by their type of pressure effect on the filled viscus.

It is well to remember that referred upper abdominal distress and pain are found with pelvic disease, with renal diseases, with cancer of the colon, with colitis, with pulmonary and abdominal tuberculosis, tumors of the lower oesophagus, tumors of the mediastinal region and with cardiac disease.

The gastric crises of tabes dorsalis, erythemas, mucous colitis and abdominal angina are confusing and may simulate actual intraabdominal pathological conditions.

Advanced osteoarthritis of the lumbar spine may give rise to severe pain. A preliminary flat film of the abdomen, in the supine position, prior to giving the opaque meal, will detect this condition.

The teeth form an important part of the gastrointestinal tract. Their examination would appear to be important as a part of a complete examination. Achylia gastrica, which may follow a chronic pyorrhea, can simulate many conditions which are of serious nature. Roentgenologic examination of the gastrointestinal tract will often be entirely negative in cases of achylia gastrica. A focal tooth infection, or a pyorrhea, may be the causative factor in this alteration of gastric acidity.

Therefore, one may demonstrate, and locate accurately by roentgenologic examination many pathologic conditions and abnormalities not otherwise demonstrable. A thorough and competent roentgenologic examination is a definite and valuable aid in correct and complete diagnosis in intraabdominal pathologic conditions. The results of such an examination will often in large measure determine the treatment to be followed.

A certain, not inconsiderable percentage of all patients examined roentgenologically for abdominal distress or pain present no abnormal roentgen signs. Referring physicians often feel, and tell the patient, that the examination tells them nothing because it is negative. May I say to you that a negative report from a competent roentgenologist usually represents more work on his part than a frankly positive report. Such a report should be a valuable piece of information. Its negativity should stimulate the referring physician to go more thoroughly into the history, and recheck on his physical examination, to bring out possible additional facts and findings bearing upon the patient's condition. I believe that this attitude on the part of a certain percentage of referring physicians has been responsible for much of the pessimism in regard to the value of roentgenologic examination on the part of many laymen.

Do not expect the impossible in diagnosis. Diagnoses based on insufficient evidence should

be severely criticized by you. John Locke said, "There is one unerring mark by which a man may know whether he is a lover of truth in earnest, viz., the not entertaining any proposition with greater assurance than the proofs it is built upon will warrant."

I plead with you not to demand from your roentgenologist a diagnosis based upon facts which will not warrant such a finding. Recognize that roentgenologic examination has certain possibilities and certain not less well-defined limitations in every field of roentgen diagnosis. Read between the lines of a report and visualize to yourself some of the problems concerned with the rendition of that report. Give the roentgenologist your cooperation, so that he may benefit by your findings as you expect to benefit by his. Your reference of a patient cannot be one-sided. Consultation means giving of information on your part as well as giving information gained by the roentgenologist in the course of his examination. You must either cooperate fully with your consultant or lose the full benefit of such a consultation. We all strive for increased diagnostic efficiency, for the results of our treatment will in large measure depend upon the certainty with which we make that diagnosis. I trust that this brief survey of this most important field will react to the benefit of the patient, the referring physician and the roentgenologist.

DISCUSSION

Dr. G. Raap, Miami:

A paper of this kind that stresses cooperation between the roentgenologist and the internist is always apropos. I believe that is one of the things that will make our work more pleasant for both of us, and we all find that as we are growing in experience along that kind of work, that that particular point is emphasized more strongly.

I did not get in time to hear all of the paper, but I know from the abstract what it contained, and we do not have to spend a great deal of time in talking about the possibilities which exist in that right upper quadrant. One thing I think we, as roentgenologists, rather hesitate to do is to send in a negative report because of the fact that we feel that the internist who sends the case to us expects something in the nature of positive findings. We feel as though we have overlooked something when we put in a negative report. But I believe we are becoming more accustomed to it. I have noticed in Miami,

speaking on a subject you all can appreciate now, that since the time of the little "slump" in Miami, there are very many more cases of gastrointestinal disturbance showing up with no findings to account for them than ever before, and in a way I am glad that has happened, because it gives us an opportunity to give a negative report except for some functional disturbance, and when we get the patient off to one side and go into the questions of finances, in all probability the patient will tell you he has had a lot of worries and that will account for most anything. So, as I say, we are called upon to make negative diagnoses frequently. I believe we should be very careful in making a negative diagnosis, giving all of our findings so that they may be of as much aid as possible to the internist.

In connection with the question of cholecystitis, we still have a great deal to learn about the relation of other pathology in the upper gastrointestinal tract to the secretion of this dye we are all so enthusiastic about. I believe there are a number of cases in which if the patient has some other upper gastrointestinal tract disturbance in addition to that of the gall-bladder, we do not get a correct reading, either with the oral or the intravenous method. I have tried both of them, the oral method being used most of the time.

I have seen cases, for instance, of duodenal ulcer in which gall-bladder trouble was not suspected, and when found, the dye was given and the findings were very unsatisfactory in relation to the gall-bladder; it did not fill out right. I believe these other pathologies account for a good deal of this trouble in cholecystography.

Dr. W. McL. Shaw, Jacksonville:

I want to express my appreciation to Dr. Herpel for this excellent paper, and to emphasize one point he brought out, and that is the fluoroscopic study of the chest preliminary to gastrointestinal work. It only takes a few minutes and very often helps out a great deal. Many basal pneumonias, diaphragmatic changes such as hernia, adhesions, etc., and changes in the chest that are not suspected, will be picked up in this way.

I want to recite one case which demonstrates this point very aptly. A young Irish boy, 21 years of age, perfectly healthy, one day after eating a hearty meal, walked upstairs and as he reached the top step, he fell in a heap and let out a yell. He had dyspnea and pain in the abdomen. He was given hot salt water by his mother and promptly vomited with no relief. The family

physician was called and diagnosed it acute indigestion, gave a hypodermic and ordered enemas. The next day the patient was no better, still suffering pain in the abdomen. He received another hypodermic and more enemas. The third day another physician was called, who diagnosed the condition. (Slides.)

We examined him first the afternoon of the third day, and found, as you see here (slide), a spontaneous pneumothorax of the right lung, practically complete. This is one of a stereoscopic set. The heart shadow is in fairly normal position. The interesting thing concerning him with the examination with the screen was that he had a to and fro swing of the heart. When he would breathe, his heart would swing like a clock pendulum. When the diaphragm elevated on one side, it dropped on the other, instead of rising and falling together. The diagnosis was immediately apparent by this big pocket of air in the right pleural cavity with the right lung collapsed. (Slides shown taken in various positions.) In the stereoscopic pair, we thought we could make out a slight rent near the apex.

Fourteen days later the second examination showed considerable inflation of the right lung (slide).

The third examination twelve days later still showed improvement. The upper lobe is coming out fast and the lower is almost completely out, but we can still see the border of the lung tissue of the middle lobe.

The fourth examination was one week later, and shows a practical return to the normal, but there is a small amount of air just above the right diaphragm.

The fifth and last examination was two weeks later, and he had returned to normal. The heart shadow had come back to the right, and this film was made 46 days following his attack. Notice those lungs. They are normal from a tuberculosis standpoint.

Dr. F. K. Herpel, West Palm Beach, closing:

I do not think there is anything further to cover. Dr. Shaw's report of a case is interesting because we frequently find, in hospitals dealing with a large number of tuberculous individuals, a sudden onset of upper abdominal pain and, on examination of the lung fields by the roentgen ray, find a spontaneous pneumothorax. A nontuberculous basilar type of pneumonia may give rise to the same symptoms.

CONGENITAL AMYOTONIA—REPORT OF TWO CASES*

C. C. RUDOLPH, M.D.,
St. Petersburg.

This condition was first described by Oppenheim in 1900. Since that time there have been approximately 200 cases reported in the literature.

The etiology of the condition is entirely unknown. It is apparently not generally familiar, although several authors have reported two or more cases in the same family. The disease is congenital, although in the majority of cases the fact that "all is not right" is not noticed until some time after birth. Sex apparently plays no part in the condition.

Pathologically the lesions vary and the probability is that no one pathological condition accounts for the whole picture. In some of the severe cases that have gone to necropsy reduction in the size and number of the anterior horn cells and some loss of muscle fibers with hypertrophy of others and replacement with lipomatous tissue, have been observed. Yet with the muscular and nerve changes it is not certain whether these are degenerative or dependent upon a failure of development. Holmes, in the *American Journal of Diseases of Infants and Children*, 1920, concludes in favor of retarded embryological development. Kraabe, Keerhardt and others believe there is no difference between this and the Werdnig Hoffman type of progressive muscular atrophy.

Symptoms: These consist of remarkable flaccidity and loss of power of the muscles, most marked in the extremities, but affecting all parts of the body. In contradistinction to the Werdnig Hoffman syndrome, there is no progressive involvement of muscles and there is apparently no tendency for the involved groups to increase in loss of power. The muscular weakness may be so great that only movements of the fingers and toes can be made. In the severe cases the muscles of the trunk, neck and intercostals are involved and as a result the child does not sit or hold up the head and the breathing, especially the thoracic type, is frequently interfered with. Any movements possible are usually made slowly and with uncertainty. The child usually lies

*Read before the meeting of the Pinellas County Medical Society, May 20, 1927.

quietly in whatever position he is placed. Sensation is not disturbed. Electrical contractility is diminished or absent but without reaction of degeneration. The sphincters are not involved. The tendon reflexes are markedly diminished and in severe cases absent entirely. The muscles do not appear atrophied though they are flaccid and soft. Intelligence is normal.

Course and prognosis: These are not yet well determined though the prognosis seems to be in more or less direct relation to the severity of the loss of muscle tone. As far as observations indicate there is no tendency for the condition to become worse and in a number of cases a decided improvement has been seen, but no instance of recovery has been recorded. The mortality is rather high, death usually resulting from intercurrent respiratory infections.

Diagnosis: This rests upon the congenital origin, absence of progressive advance and the remarkable atony without atrophy. The Werdnig Hoffman syndrome of progressive muscular atrophy is the main condition with which congenital amyotonia may be confused. In the milder cases the question of advanced rickets may be confusing.

Treatment: General upbuilding seems to be the main essential of therapy. Electricity, massage, quartz light exposure and the use of thyroid extract have been tried with poor success.

Case 1. J. H. Age, 10 months.

Present illness: The condition dates from birth. The first thing noted was that the child did not kick or move actively as a normal infant should. Until three or four months of age the child was unable to perform any voluntary movement except that of the fingers and toes. Since then she has been able to make some slight movement of the forearms. Although ten months of age, at present the infant is unable to sit alone or hold up the head. The nutritional condition has been poor, which probably has no direct bearing upon the present condition, inasmuch as she has never had food other than breast milk and apparently an insufficient amount of this. The mother has lately noticed some backward curvature of the spine. She is of the opinion that there has been some slight improvement recently.

Birth history: Full term normal noninstrumental delivery. First pregnancy. There is a vague history of cyanosis at birth. No convul-

sions, no rash or snuffles. Took breast well at first attempt. The mother is not sure but thinks she felt the fetal movements during pregnancy.

Past history: No previous illness except for several transitory upper respiratory infections.

Family history: Father and mother living and well. No familial tuberculosis or lues. Mother states that father's sister was afflicted with a similar condition and did not stand until three years of age. Is living and well at present time.

Physical examinations: Poorly developed and nourished white female infant who lies inactive on the examining table. Skin and mucous membranes somewhat pale and anemic.

Head: Symmetrical. Posterior fontanel closed. Anterior open, admitting two fingers, no bulging. No craniotabes or prominent bosses.

Neck: No masses. Decided head drop with no tendency toward contraction of the neck muscles.

Eyes: Pupils are equal, symmetrical, normal in size and react to light.

Ears: Drums and canals negative.

Nose and throat: Negative.

Mouth: Three teeth, first appeared at seven months.

Nose and throat: Negative.

Chest: The intercostal spaces are rather prominent. Marked flaring of the lower ribs. Some moderate beading of the ribs. Breathing is equal symmetrical and practically entirely abdominal in type.

Lungs: Breathing is vesicular. Percussion is resonant. There are no rales.

Heart: The borders are normal. The rate and rhythm are good. Sounds are clear without murmur.

Abdomen: There is moderate protuberance of the abdomen. There are no palpable organs or masses. The tonus of the abdominal muscles seem to be better than that of any other group.

Genitals: Negative.

Extremities: Infant moves the forearms, hands and fingers slowly and with weakness. No movement of lower extremities except that of the toes.

Musculature: The muscles everywhere are markedly flaccid and relaxed. There is hypermobility of the joints. There is apparently no atrophy, although on palpation they are soft and hard to distinguish from the subcutaneous tissues. The atonicity is most marked in the

muscles of the shoulder girdle, extremities and the neck.

Reflexes: There are no pathological reflexes present. All tendon reflexes are abolished.

Laboratory findings: Urinalysis negative. W.B.C., 8,000; R.B.C., 4,000,000. Parents refused to allow blood to be taken for Wassermann.

Progress: Two weeks after the first examination the infant contracted a bronchitis and two days later a broncho-pneumonia which lasted for two weeks, during which the temperature varied from 99 to 101.5, but the child finally recovered. At the present time the child is 19 months of age, weighs 22 pounds. She is able to move arms and legs weakly and can hold up the head for a short time. Is unable to sit alone, walk, etc., and is still unable to adjust herself when placed in an awkward position. Is able to say "Mamma," "Papa" and a few other simple words.

Treatment: This has been purely upbuilding in type until the past two months during which she has been given electrical massage, which has apparently benefited the condition but little.

Case 2. H. T. Age, 3 months.

Present illness: Mother is rather vague about the activity of the infant during the first two weeks of life, at which time she first noticed that she did not move normally. Since then the child has made no voluntary movements except that of the fingers and toes. There has been no attempt to hold up the head. The cry from birth has been very weak. The chest was well formed at birth, but since then the contour has undergone a remarkable change. The nutrition has been poor though apparently well satisfied at the breast.

Birth history: Full term, prolonged, non-instrumental delivery. First pregnancy. No cyanosis, convulsions, rash or snuffles. Took the breast well at the first attempt.

Feeding history: Breast fed entirely but with no regularity. Weight gain has been slow.

Family history: Father living and well. Mother living but complains of general run-down condition. No familial history of tuberculosis, lues or of a corresponding condition in any member of either family.

Physical examination: Poorly nourished inactive white female infant.

Skin and mucous membranes are pale.

Head: The head is symmetrical. Both fontanelles are open, no bulging. No cranio tabes. Parietal bosses are prominent. No increase in size.

Neck: No masses. There is marked loss of tone to the neck muscles, allowing the head to drop backward when child is held in horizontal position.

Eyes: Pupils are equal, symmetrical, normal in size and react well to light.

Ears, nose and throat: Negative.

Mouth: Negative.

Chest: The chest is triangular in shape. There is marked anterior angulation with the base of the triangle formed by the back. There is marked flaring of the lower ribs. Slight beading of the ribs.

Lungs: The breathing is vesicular. Percussion is resonant. There are no rales.

Heart: The borders are difficult to define on account of the deformity of the chest. Sounds are clear without murmur. Rate is rapid.

Abdomen: The liver is enlarged. The spleen is not palpable. There are no masses. The abdomen is very protuberant. The muscle tone is poor but seems to be better than that of any of the other groups. There is no tenderness or rigidity. The breathing is practically entirely abdominal.

Genitals: Negative.

Extremities: Moves only the fingers and toes.

Musculature: All muscles seem soft and flabby and lacking in tone. The extremities, intercostals, shoulder girdle and neck muscles seem most actively involved and the abdominals the least. There is hypermobility of the joints.

Reflexes: There are no pathological reflexes. The tendon reflexes are everywhere abolished. Sensation seems everywhere normal.

Laboratory findings: Wassermann reaction negative. Urinalysis negative.

Progress: There was at no time any improvement. Two months after the first observation the child contracted an acute upper respiratory infection, the next day a broncho pneumonia, and died the following day. Necropsy not permitted.

TREATMENT OF INOPERABLE RECTAL CANCER BY THE EXTRACTION OF HEAT WITH CARBON DIOXIDE SNOW*

JACK HALTON, M.D.,
Sarasota.

Quoting Dr. E. J. Clemons of the Proctologic Department of The Los Angeles General Hospital, who originated the application of carbon dioxide snow for the treatment of anal stricture and cancer of the rectum, as follows:

"Cancer claims one in twelve of the human race, and of every thirty lethal cancers, there is one that projects into the rectum. While it should be an easy matter to diagnose such a condition, over fifty per cent of those that suffer from rectal cancers are inoperable when first seen by the proctologist. It is, therefore, a great source of pleasure to present, for your consideration, the fact that heat can be extracted from the rectal structure by the use of carbon dioxide snow as a palliative measure which, in a number of typical advanced and seemingly hopeless cases, has given prolonged relief with apparently a clinical cure."

Consider the fact that in all cases of cancer of the rectum the prognosis is, to say the least, a very serious one, and no cheer could be given to the patient, outside of the statement that a colostomy, and perhaps a rectal resection, was the only method of probable relief, and that only temporary. Up to the time of Dr. Clemons' use of the carbon dioxide snow treatment, operation was all that could be offered the sufferer from rectal cancer, and we are compelled to admit that only a grave prognosis could be made.

It was my pleasure and privilege last year, while in attendance at the annual meeting of the American Proctologic Society at Indianapolis, to see Dr. Clemons treat several cases of anal stricture by the application of carbon dioxide snow, and I was very much impressed by his work and demonstration of his method of treatment. After the meeting in Indianapolis I ran down to Louisville, Kentucky, with Dr. Granville Hanes, and assisted him in using the same method of treatment on two cases of inoperable cancer of the rectum, the results of which were nothing short of marvelous, so much so, that I could hardly believe such results were possible. I have been kept informed of the

progress of these cases by Dr. Hanes, and the lasting results of the method are still in evidence.

I should like to have the time to go into the history and treatment of these particular cases, but time forbids, therefore I shall confine myself to a case report of adeno carcinoma in a lady sixty-two years of age, to whom I was called in consultation at the Sarasota Hospital by her attending physician.

The history of this case ran as follows: The doctor was called to the home of this patient and found her confined to her bed. She was running a high temperature and pulse, and showing symptoms of a general toxemia. She stated that she had been suffering from hemorrhoids and bloody discharges from the rectum for a year or more; that she had not passed a solid, or formed stool for over eight or nine months, and that for the past three months nothing had passed from the rectum but a bloody, jelly-like fluid full of mucous. She was removed to the hospital where I saw her in consultation about ten days after her admittance. Rectal irrigation had been attempted, but gave no relief. X-ray pictures were taken which showed a shadow in the region of the mouth of the sigmoid extending for some distance into the rectum. The case was charted as under observation and no diagnosis was made.

Upon proctoscopic examination I found a soft flaccid anal opening, and an intense proctitis of the whole of the rectal canal, up as far as the second valve of Houston, beyond which the proctoscope would not pass. Inflation through a Tuttle sigmoidoscope was then attempted, but with negative result. A large papilomatous mass, bathed in blood, pus, and mucous, filled the rectal canal, and was absolutely impenetrable, even by the smallest rectal catheter, or probe. I made a tentative diagnosis of carcinoma, and a biopsy was done and specimens sent to the laboratories at Jacksonville and Atlanta. Both laboratories returned their findings as adeno-carcinoma.

Upon receipt of the laboratory findings I advised the treatment of this case by the carbon dioxide snow method.

The patient was prepared in the usual way and treatment with the carbon dioxide snow started on Saturday night and continued for about two hours. Patient was put back to bed and spent a quiet, restful night, the first, by the

*Read before the DeSoto-Hardee-Highlands County Medical Society, Wauchula, June 14, 1927.

way, since her admission, without the use of opiates. Sunday morning, at eleven o'clock, I found her resting very comfortably. Temperature had dropped about three points, and the pulse was stronger. Monday morning a serous exudate was pouring from the anus. This gradually diminished, and abated about the fourth day. On the third day after the first application of the snow treatment, the patient passed a well-formed stool in four pieces, each piece about two inches long, and as large in diameter as one's little finger. This was followed by about one pint of soft fecal matter mixed with blood and mucous. Temperature became normal, and from this time on patient had one or two stools a day, each day showing an improvement in the size, form, and consistency. On the fifth day the patient was allowed to get up and move around; and she left the hospital six days from the time of her first treatment, feeling, to use her own term, "very fit and comfortable." On the seventh day a sigmoidoscopic examination was made. The proctitis was rapidly clearing up, the rectal mucous membrane from the anus to the previous point of obstruction was assuming a normal appearance, the sigmoidoscope passing easily to the mouth of the sigmoid. Another two-hour treatment was given on this day, and the patient left the following morning by motor for her home in St. Petersburg, with orders to report for examination ten days from date.

She presented herself at my office ten days later, having driven from St. Petersburg. She had gained five pounds in weight, and was looking well. She stated that she had been doing her own housework, and had never felt better in her life. Proctoscopic examination showed the ampula filled with well-formed feces, which, on being washed away by irrigation, revealed a fairly healthy condition of the mucous membrane of the rectal canal, which was well open, right to the mouth of the sigmoid. She stated that she was having one or two well-formed stools each day, and that, outside of a little blood, and a few shreds of mucous, they looked perfectly normal.

She has reported at my office every two or three weeks for observation, driving from and to St. Petersburg, seemingly without undue fatigue. No cathartics or laxatives of any kind have been used in the treatment of this case,

with the exception of a little mineral oil per month each night. Rectal enemata of normal salt solution, two quarts, is practiced daily, followed by rectal injection of one ounce of two per cent mercurochrome.

She came to my office two weeks ago, and objected to coming again, for the reason that she felt so well, and was so regular that she needed no further treatment.

This has been my experience with five cases of adeno-carcinoma, and five or six cases of rectal stricture, and I have come to the conclusion that I shall never again do an internal or external proctotomy for the relief of anal stricture and shall hesitate a long time ere I do a colostomy or rectal resection in these old carcinoma cases.

Quoting Dr. Clemons again, on the effects of this treatment: "The first application rapidly causes the cancerous mass to become soft and boggy. A sero-sanguineous exudate appears within twenty-four hours, diminishing each day, practically disappearing about the fourth or fifth. There is no apparent reaction following second treatment, as is observed after the first. Growth gradually hardens, until in about six weeks it is reduced over two-thirds in size. Succeeding treatment, likewise, effects alternate softening and shrinking of the tumor, so that, after six months period, which should include three courses of two applications of the snow, one week apart, followed by an observation period of six weeks, there is only a resemblance of the tumor remaining. From now on single courses of heat extraction, of one hour, every six weeks, hold the growth in abeyance. Thus, by persistently disturbing the metabolism of the cancer at stated intervals, the object attained, is that of subjecting the growth without interfering with the individual; the fact really being that the general health of the patient actually improves. Although nature has provided for the protection of normal tissues against thermic changes in different parts of the body, rapidly multiplying malignant cells have no way to overcome the effects of loss of heat, quickly abstracted; hence, while there are means for normal structures to hastily regain their former physical states, there are no provisions for cancer to recuperate likewise."

I will now demonstrate the method of application, and the production of carbon dioxide

snow for this treatment, explaining as I progress, the niceties of the technique.

I present to you this form of treatment as a means for fulfilling the Golden Rule of the practice of the Healing Art, namely to relieve human suffering in a pleasant, safe, and quick manner. The procedure is not incapacitating. It does away with operative procedure. It is painless. There are no untoward effects; and, especially in anal stricture, there is no recurrence; in fact the stricture becomes more and more pliable as time goes on, owing to the passing of bowel contents.

VINCENT'S ANGINA—REPORT OF A CASE

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Dunedin.

Vincent's Angina was described by H. Vincent in 1898 and since then much time has been devoted to its study. This malady is not considered with alarm as it apparently yields readily to treatment of various types. The fusiform bacillus and spirillum occur normally in the body in great numbers about the teeth, in the crypts of tonsils and in the adenoids.¹ It also is found around the labia in the female.

Many types of treatment have been recommended by as many different authors; chief among which are salvarsan locally and intravenously, 5% solution of chromic acid, silver nitrate solution, Fowler's solution, mercurochrome, wine of ipecac, trichloroacetic acid, tincture of iodine, sodium perborate in solution and paste, potassium permanganate, tricesol, zinc permanganate locally and tartar emetic intravenously. The type of treatment in the following case was decided upon because the infection was thought to be general as well as local. The patient had a kidney lesion so salvarsan and mercurochrome intravenously were ruled out in favor of tartar emetic, which was thought to be less irritating; therefore the patient was given tartar emetic intravenously and a tricesol mouth wash locally.²

REPORT OF CASE

Mrs. W. H. R., white female, age 52, was first seen February 9, 1927. Her chief complaints were "stomach trouble and headache." Mother and one sister died of pulmonary tuberculosis. Father had cancer of stomach, but met death accidentally. Patient had a skin cancer removed

successfully 20 years previously. She had had the usual childhood diseases, pneumonia in 1922 and a bloody diarrhea lasting 3 weeks in 1924. No operations except the extraction of the lower right sixth tooth years previously. She had been married for 28 years, husband and 5 healthy children all living, no miscarriages and an uneventful menopause 6 years ago.

Her present illness was sharp pains and dull aches in the upper right quadrant of the abdomen and headache accompanied by occasional dyspnea. Pain in the abdomen was transmitted to the right shoulder. Occasionally a swelling in the gall bladder region accompanied with fever but no jaundice occurred. She could eat crisply fried breakfast bacon without distress, but other fats, sweets, cake and sweet potatoes caused gastric pain with nausea, but no vomiting. Stoop-ing and turning caused pain over the gall bladder. Dull occipital headaches were constantly present, but were worse in the morning. She had gradually been getting worse and losing weight for the past two years and felt badly all the time.

PHYSICAL EXAMINATION

Temperature, 98.6; pulse, 80; respiration, 18; blood pressure, 190/120; weight, 137 pounds. Her breath was very foul. Heavy deposits of calculus were on all teeth, especially the upper molars and bicuspid and inside of the lower anteriors. All teeth were badly snuff stained and the upper right 4th and 5th and upper left 4th, 5th, 6th and 7th were loose. The tooth attachment (peridental membrane), on the 6 above mentioned teeth had been absorbed from pus caused by irritation from calculus. The upper left cuspid was broken off even with the gums, which were not highly inflamed, but congestion was marked around the gingivæ. There was neither sloughing of tissue nor ulceration present to show trench mouth. The gums upon pressure caused pus to well up between the gums and teeth.

The first heart sound was diminished and distant and the second was accentuated. Lungs were negative. There was tenderness over the gall bladder, but no rigidity. The uterus displaced backward.

LABORATORY FINDINGS

Hæmoglobin, 59% (Dare); W. B. C., 6,900; R. B. C., 2,444,000; Differential; Polymorphonuclears, 74; Lymphocytes, 23; Mononuclears, 2; Eosinophils, 1. Urine, clear, straw, alkaline, sp. gr., 1.008 neg. sugar, trace of albumin, epithelial

cells and 2 plus pus. Jaundice index 7. Blood Wassermann negative.

She was given sodium benzoate and sodium salicylate and sent to the dentist to have her teeth extracted.

On February 12th, Dr. Russel McLean, under novocain anesthesia, extracted two teeth, the upper right five and four as these were the worst. Gums healed satisfactorily.

February 15th, extracted upper left four and five. Gums healed all right.

February 19th, extracted upper left six, seven and eight. Gums healed all right.

February 23rd, extracted upper right seven and eight. The patient was getting along nicely and said she felt much better already.

February 26th, extracted lower right four, five and seven. The 6th had previously been extracted years before. Bleeding was free following each extraction and the gums healed satisfactorily. The last 3 teeth extracted had been done under a nerve bloc. The patient left the dental office, feeling all right.

The next morning, February 27th, however, her right jaw began to pain and ache and she was unable to open her mouth very wide. This pain continued until March 3rd when she returned to the dentist for relief. Her gums looked all right but the motion of the mandible was restricted, so the dentist forcibly opened her mouth which caused her rather severe suffering. Her pain was unilateral, being confined to the right jaw. She was given a mild antiseptic mouth wash and codein for the pain.

She went home, but the pain did not cease and her jaws remained almost locked. March 7th her physical examination was about the same as before except her blood pressure was 160/80, probably because she had been in bed for three days. Her temperature was 98.6, pulse 80 and respiration 18. The gums where the teeth had been extracted looked all right. March 8th, her condition was the same except the pain was more severe. March 9th, her right jaw in the region of the parotid gland began to swell and was more firmly locked so that only liquids could be administered. Her temperature had gone to 100, pulse 100 and blood pressure 110/70, a fall of 80 mm. of mercury. First heart sound was inaudible and the second could just be heard. Digitalis therapy was begun. A white spot had appeared on the upper right gum margin where the teeth had been extracted February 23rd. An-

other was seen on the lower right gum margin. The throat could not be satisfactorily examined due to the stiffness of the jaw. Smears and cultures were taken from the white spots on the gums. The smear looked like a pure culture of Vincent's organism with the spirilla predominating. The culture was negative for diphtheria. The hemoglobin was 55, W. B. C., 13,350; R. B. C., 3,064,000. The urine contained albumin and pus. 3 c.c. of 1% tartar emetic was given intravenously preceded by $1\frac{1}{2}$ gr. caffeine sodio-benzoate intramuscularly. No reaction occurred.

The following day, March 10th, her general condition seemed better although hyaline casts and blood appeared in the urine. Her jaw continued to swell and her mouth could scarcely be opened. Her systolic pressure rose to 130 and heart sounds improved. She said she felt better.

March 11th, she seemed better although the infection in the mouth was spreading some but had not gotten over to the left side and she was spitting and swallowing small pieces of membrane. Her jaw was swollen more and was very hard but not hot or red. Her temperature from now on varied from 99 to 103 and was of the septic type. Her urine still showed some blood.

March 12th, the pus and blood in the urine had almost disappeared. Her blood pressure was 150/90. The swelling in the jaw had begun to extend into the neck. The infection in the mouth had not spread any further. She was given 5 c.c. of tartar emetic intravenously.

March 13th. Patient felt better and rested better and seemed improved generally. Her jaw had begun to soften. She was still spitting out membrane which seemed easier to get out. Blood pressure was 140/90.

March 14th. There was definite fluctuation in the jaw. Under novocain anesthesia Dr. L. B. Dickerson opened it from the outside. About 2 ounces of very foul smelling thin white pus, accompanied by several gas bubbles, were evacuated. $\frac{1}{2}$ dram of 2% mercurochrome solution was instilled into the cavity and a gauze drain inserted. Two hours later the abscess ruptured on the inside of the mouth near the angle of the jaw and about two more ounces of pus escaped through the mouth. A smear from the pus showed what appeared to be a pure culture of fusiform bacilli with a rare spirillum. Culture on Loeffler's media resulted in a pure culture of short chain streptococci. The pain

was somewhat relieved. The albumin had cleared from the urine although there was still a trace of blood and one plus pus.

March 15th. The patient felt better and could open her mouth wider. The swelling had begun to subside. Blood pressure was 140/90. The infection had covered her entire mouth, the mucus membrane, tongue and lips being coated white.

March 16th, 10 a. m. Patient seemed much improved. She talked more cheerfully, and could open her mouth wider than before. Hemoglobin 58%; W. B. C., 7,200; R. B. C., 3,468,000; polymorphonuclears, 73; lymphocytes, 23; mononuclears, 1; eosinophils, 1; neutrophilic myelocytes, 2. Urine: cloudy, amber, acid, negative sugar, negative albumin, one plus pus, trace blood and occasional hyaline cast. Blood pressure was 120/70. 5 c.c. of tartar emetic was again given intravenously. The odor was still very foul, requiring a deodorizer in the room. At 1.30 p. m., while she was being propped up in bed, washing out her mouth, she dropped back dead. Death being due to cardiac failure.

CONCLUSIONS.

1. Not enough stress is placed in the medical and dental schools on the relation of these two professions and on their mutual problems.

2. All patients with infected gums and teeth, whether or not there is ulceration or sloughing present, should have a smear made for Vincent's infection and the infection, if present, cleared up before any teeth are extracted or other operative measures instituted.

3. It is probable that many physicians, when examining a patient's mouth and noting badly cared for teeth and foul breath, dismiss said patient by telling him to have his teeth extracted, which may, as in the above case, result in the death of the patient, if Vincent's infection be present and not cleared up beforehand.

4. It is interesting to note that the Vincent's organism in the mouth had spirilla predomination, in the abscess the fusiform bacilli with gas formation predominating, while culture on Loeffler's media resulted in a short chain streptococci. It may be that Vincent's organism may have several developmental stages, including the streptococci rather than the accepted two stage development.

5. It is also interesting to note that the albumin

in the urine cleared up after tartar emetic injections.

¹Miller, Hiram E., and Epstein, Norman: *Vincent's Angina, California and Western Medicine*, 24:5, 633-637, (May), 1926.

²Driscoll, T. L.: *Virginia Medical Monthly*, July, 1926. Ross, Clyde F.: *Virginia Medical Monthly*, 48:579, January, 1922.

THE INTRAVENOUS TREATMENT OF MALARIA WITH QUININE

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Tampa.

Much has been written, and by many eminent men, of the treatment of malaria, but little has been said about the intravenous use of quinine in this disease except that it is a dangerous method and should be employed only as a last resort, or when all other methods have failed.

During a period of 17 years in a highly infected section of Georgia many symptoms have presented themselves that are not to be found in the texts that I have studied.

I refer to the chronic form of malaria, with such symptoms as rheumatism, loss of appetite, gastric disturbances, a general malaise, pain in almost any part of the body and in many different forms, such as headache, neuralgia, symptoms of bursitis of almost any of the joints, tender spots in and around the joints, a creeping, crawling sensation in the head, often described as if wood lice were crawling through the brain. Pain in the back and shoulders and muscular soreness.

It is often true that these are the most prominent symptoms and you will find with these symptoms a vacant stare, apathy, mental dullness, thickened appearance of the skin, dizziness and sometimes blindness after stooping, a brownish discoloration of the orbital conjunctive, and a dried-out condition of the flesh of the body, and muscular weakness. The urine is highly colored, of a high specific gravity and diminished in quantity. It is after these symptoms have existed for sometime that suddenly and without warning the pink discoloration of the urine which passes often unnoticed by the patient, appears, and in about ten hours there is bloody urine, nausea, vomiting of a greenish black vomit, high temperature, rapid pulse, restlessness, delirium, rolling of the head from side to side, also a rolling from side to side of bed, extreme jaundice and patient is kept on bed with difficulty.

In a few hours there is a suppression of urine, increase in the temperature and pulse rate as well as all other symptoms, rapidly followed by death. It also appears that these cases occur in groups in certain localities and during the months of July and August; however, they may occur at any season of the year. The hemorrhagic type is not limited to any age except that it does not appear in children under five years.

In the female the same symptoms prevail as in the male except that they often suffer from profuse and continued metrorrhagia, for which they seek surgical aid without relief, unless they have a hysterectomy.

For many years an attempt was made to treat these different symptoms as definite disease entities as they would appear in different groups but little result was obtained.

In 1915 a few cases were selected and treated by giving quinine intravenously and the results were so satisfactory that this treatment was gradually broadened to meet all classes, until at the present time it is used to the exclusion of all other methods in beginning the treatment of malaria in all of its forms. The administration of quinine intravenously is not a new method, but from what information I can gather it is not generally used, but advised only as a matter of last resort. Dr. Bass condemns this method as being "dangerous and spectacular" and says that it well deserves the criticism usually given to this method.

The total absence of danger by the intravenous method is the point I wish to emphasize. For five years I have practiced this method daily and have yet to see an unpleasant result from a single dose. At times this method is life-saving, especially is this true in the cerebral, hemorrhagic and quinine-resistant types of malaria to quinine administered orally.

For the treatment of the acute forms of malaria six daily doses of quinine intravenously followed by oral administration of quinine for fifteen days will place these people in fine shape and they can continue their duties without any loss of time. The following case histories will give a better idea of the splendid results obtained by this method:

Case No. 1. Colored woman. Age, 70.

History showed she had been a sufferer from malaria for years. Present history showed she had been having chills for three months and had

been treated by her doctor in the usual way. During this time she grew thin, and was very weak with no improvement. Resorted to chill tonics and other supportive methods with no results. At the time this patient was seen temperature was 104, pulse 140, respiration 36, unconscious, rolling from one side of bed to the other with involuntary movement of bowels and kidneys and was kept on bed with difficulty. One intravenous injection of quinine was given. In ten minutes nervous symptoms were better and patient was resting better. In 30 minutes another dose was given. From this dose patient showed some nervousness for a few minutes, gradually quieted down, and in one hour pulse had dropped from 140 to 100, temperature to 101, and respiration had dropped to 20. In three hours involuntary movement of bowels and kidneys had stopped and in 10 hours from administration of first dose patient was rational and ate a light breakfast.

This patient did not receive another dose of quinine in any form in 10 days, then she was put on quinine orally and made a rapid recovery. This was done to show the effect of quinine intravenously over the oral method.

Case No. 2. White girl. Age, 14.

Arose in the morning, dressed for school, ate breakfast but complained of feeling badly. Went into her room and later was found, about 9 a. m., with temperature of 100; at 3 p. m., temperature was 104. Patient was unconscious in a few minutes, jaws locked, body rigid with a tendency to oposthotonos position. At 3:30 p. m., one dose of quinine was given intravenously; in three hours, another dose was given. After this dose, patient showed some signs of improvement by a falling temperature, loss of rigidity of body and neck muscles. The following morning, mind was clear and a third dose was given. Patient made uneventful recovery.

Case No. 3. White man. Age, 20.

Had worked all day. Complained of feeling badly but continued to work until about 5 o'clock. Was seen at 6 p. m., with temperature of 102. Urine was pinkish in color, normal in amount and no jaundice.

No quinine was available at this time, so patient was allowed to go until the following morning and when seen urine was bloody, entire body was jaundiced, including the palms of hands and soles of feet. Vomiting, rapid pulse;

temperature 103 F. with profound prostration.

Quinine was administered intravenously every six hours for five doses and in 48 hours urine was clear and patient made rapid recovery.

Cases Nos. 4, 5, 6. Males. Age, 25, 35, 40.

All of the hemorrhagic type but seen after the first 24 hours; were treated in same manner; had uneventful recoveries but the results were not so marked, due to the fact that the quinine was not given soon enough.

Case No. 7. White married man. Age, 36.

Was seen in consultation on the third day of the disease, was treated by quinine intravenously and for 24 hours after treatment was begun, patient seemed to improve, but later I was told he died from suppression of urine.

Case No. 8. White girl. Age, 18.

Was seen about 10 p. m. High temperature, rapid pulse, nausea and vomiting. Urine voided at this time was of a pinkish color. Fifteen grains of quinine was given intravenously and when seen on the following morning the urine was normal in color, vomiting had ceased but temperature was 103. Another dose was given and the following morning a third dose was given. Urine did not show any more blood and patient made uneventful recovery. This case shows clearly that if these patients can be seen in the first ten hours and with this method of treatment the disease can be prevented as well as cured.

During the years of 1916, 1917 and 1918, the administration of quinine intravenously to malarial patients was gradually broadened, but it was in the spring of 1920 that this method was used so much. During this period it was administered to all classes of patients suffering from malaria and during this year 2,828 doses were given. Out of this number there was not a bad result.

The youngest patient was 8 years old and the oldest was 70. Children bear quinine given intravenously, in proportion to age, weight and height, better than adults.

The quinine-resistant type of malaria to quinine given orally usually go the rounds of all the doctors and to this class the intravenous use of quinine will clear them up after giving as much as eight doses. In treating these patients no drugs were used during the administration of quinine intravenously, so the improvement

cannot be construed to the use of any other drug.

Case No. 9. White man, married. Age, 36.

Had chills in 1918. In 1919 moved into screened house. In April, 1919, began to have chills. Was under the care of three different men for different times. The last man put him on a 60-day treatment of quinine and on the third day after discontinuing this treatment he had a chill, but continued to take quinine himself, taking it daily, together with different brands of chill tonic.

This man was seen in March, 1920, and after taking the history and making the physical examination I failed to find anything that could be producing the chills unless it was malaria. He was a very large man and usually carried a large amount of flesh and the best we could decide was a loss of about 50 pounds; was weak and unable to do any work. He claimed that he had not allowed any mosquitoes to bite him since he had moved into the screened home, 1919. He complained of pains in almost all parts of his body, also an intense headache and backache. He was given daily doses of quinine intravenously for six days. In thirty minutes after first dose all his pains were gone and he said he felt much better. These pains did not recur, his appetite was improved and he immediately began to gain weight and strength and at the end of six days he began farm work again. He was advised to take quinine daily. In seven days after he was given last dose, he had another chill and again five daily doses were given. This man was seen a few months ago and he was well and had not had any more chills.

The preparation of quinine employed was the dihydrochloride, ranging in doses from 3 to 15 grains.

The site of injection usually is the median basilic vein. Symptoms in rotation from moment of beginning the administration are: a dryness of throat and larynx and a bitter taste in the mouth with flushing of face and reddening of the conjunctival mucous membrane, followed by tingling sensation of feet and hands and increase in pulse rate. Patient is allowed to retain the recumbent position for ten minutes, then he is gradually allowed to assume the sitting posture and allowed to go.

The guide to the administration of this drug is the pulse rate. From the moment of the beginning of the drug the finger should be placed

on the pulse and with this as a guide you can give your drug as fast or as slowly as the pulse is accelerated or does not show any increase in its beats.

Some patients show a decided idiosyncrasy to this drug given in any form and of course this must be looked into before giving quinine in any form.

Malaria is an economic problem among ourselves and I feel that we must adopt some method of treatment that will give a quicker and more lasting result than the methods now used in treating acute cases and eliminating the carrier. I hope what I have said is sufficient evidence to relieve the mind of any one who thinks it is dangerous to administer quinine intravenously.

REPORT OF AN UNUSUAL MASTOID CASE WITH A FATAL TERMINATION*

J. ROBERT SIMPSON, M.D.,
Miami.

This has been a very interesting case to me, and I hope you will be interested. It aroused my interest because I have not been able to make a diagnosis, and if you will be kind enough to help me make a diagnosis I shall be very much pleased.

J. G., white male, aged 9. Patient first seen January 26th, complaining of pain in the left ear which grew worse at night, causing restlessness and inability to sleep. He gave a history of discharge since the age of four, which would clear up each summer, to break down again during the winter months. The present attack had lasted four weeks, during which time he had been under the care of some physician, but an operation had not been advised.

Examination showed extreme tenderness over the mastoid, and especially over the tip, with quite a profuse and foul discharge from the external auditory canal. I made a diagnosis of a subacute or chronic mastoid with an acute exacerbation, and advised an immediate operation. Patient entered the hospital next morning, temperature 99, pulse 100, respiration 20. I operated on the morning of January 27th. During the operation I noticed and remarked to my

assistant that I did not find as much pathology as I expected. The cells showed very little or no pus, but the lining membrane was congested. We got necrotic material near the antrum and posterior wall of the canal. I did not remove the cortex as far back as was at one time customary, as the cells in that region showed less congestion, but I did remove all the cells down to the inner plate in the anterior part of the mastoid region.

POST-OPERATIVE.

Pain immediately cleared up, temperature dropped to normal, patient left the hospital in one week; on departure, temperature was 98.3, pulse 80, respiration 18. He was dressed daily for a while, then every other day. Patient was happy and contented and had no complaint whatsoever except the usual pain of dressing.

On February 19th, 24 days after operation, the patient complained of dizziness and pain on the right side in the mastoid region, especially down toward the tip. At this time, he brought a note from his mother saying he had complained of dizziness the day before and did not rest well that night. Examination showed temperature 101, pulse 150, some tenderness over the right mastoid, especially near the tip. The patient was ordered to bed and I advised the parents to call me if the symptoms grew worse or continued as bad as they were at that time. This they did not do. February 21st, two days later, patient seen, complained of diplopia, dizziness, and pain in his head, described it as though it wanted to part. Examination showed inability of patient to keep his eyes fixed on any object, some tenderness over the right mastoid; patient was so extremely dizzy he could not sit up in bed. The eye grounds did not show anything definite. I thought the eye grounds looked a little congested. This might have been improper lighting as I could not get proper illumination in the home, and I did not see the field very clearly.

Patient was ordered to the hospital where an X-ray study of the head and a blood culture were requested. On the morning of the 22nd Dr. Chandler saw the patient in consultation with me. Examination showed patient still complaining of dizziness, but he did not complain of pain. At this time he had developed a facial paralysis on the left side; he also had an irritation of the sixth nerve on the left side. Temperature 102, pulse 160, respiration 30.

*Read before the Dade County Medical Society, April 1, 1927.

LABORATORY REPORT.

White blood count, 15,000. A differential was not made.

X-RAY REPORT.

Stereoscopic of the skull. The skull as a whole presents average normal bony contour. Normal skull thickness. Average normal skull density for a child of approximately ten years. The sella turcica is within the normal anatomical variation. Sphenoidal sinus pneumatic, clear, distinct and negative. The frontal ethmoids and antrums are clear and distinct, pneumatic and negative. Right mastoid—projection of negative shows pneumatic cells, mixed type around the antrums, and extending down along the knee of the sinus. The trabeculae and cell walls are well defined and stand out clearly. External auditory canal is well visualized. No evidence of pathology of the right mastoid cells at the present time. The internal and external tables of the skull are intact and show no evidence of fracture or pathology. No direct or indirect evidence of brain tumor observed. The sutures show no evidence of separation and venous canals and venous channels are not unusually widened or deepened as you would find in intracranial pressure. No definite evidence of intracranial pressure observed.

Stereoscopic of the left aspect of the skull shows postoperative mastoid with incomplete removal of the cells. The cells around the antrum and anterior to the knee of the sinus show partial occlusion with haziness suggestive of bone absorption. The cells in the region of the body of the mastoid have been thoroughly removed, but the cells around the antrum on the posterior wall of the antrum have not been completely removed. Diagnosis: postoperative mastoid—incomplete removal of cells.

Dictated by Dr. Fitzsimmons.

After consultation we decided to open the left ear drum, though it was discharging some. As the symptoms were somewhat confusing, we decided to wait 24 hours and watch developments. Tuesday afternoon we received a telephone message from the hospital that the patient's temperature had gone up to 109. This I think a mistake as the chart only showed 104½. Dr. Chandler and I went to the hospital as hurriedly as possible with the intention of opening up the old wound to see what we could find. On ar-

iving we found the patient semiconscious. We rushed him to the operating room and proceeded to remove the cortex and some few cells that had been left from the previous operation. We exposed the dura, also exposed the lateral sinus. Having done this and finding no pus we were at a loss to know what was causing the alarming symptoms, and we decided to put the patient back in bed and wait a while. Patient had only been in bed about ten minutes when he quietly expired.

AUTOPSY REPORT.

Brain: Brain was uncovered at site of operation. No clot in lateral sinus. Middle ear opened, showed no pus. Meninges at operative site appeared normal. No abscess formation in brain tissue at site of operation. Skull cap was then sawed and brain removed and examined. Dura free. Pial vessels moderately congested, no exudate. Section of brain tissues shows no focal lesions, no abscesses, no massive hemorrhage. Small amount of clotted blood at base, probably from autopsy. Abdomen: Peritoneum smooth, intestinal tract and stomach normal. Spleen small, firm. Kidneys show slight cloudy swelling of cortex only. Lungs free and soft. Heart grossly normal throughout. Thymus somewhat larger than average for age. Smears from fluid in lateral ventricles show no excess of pus cells and no pathogenic bacteria. Culture from spleen made through seared surface grew staphylococcus aureus.

Dr. W. P. Stowe.

What caused death?

NOTE.—In the discussion of this paper it was brought out that the most probable complication might have been that of a labyrinthitis. After Dr. Simpson had closed the discussion and during his remarks had added the statement of the patient's mother to the effect that the boy had stated on the day previous to the development of his second admission to the hospital, that he had received a blow on the side of the head while playing, Dr. Kirsch immediately suggested that in all probability a fracture of the temporal bone might have been overlooked in the X-ray examination. The entire paper brought out considerable discussion, most of it being directed to the advisability of early paracentesis in middle ear infections as opposed to the policy of delay.

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SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will meet in Memphis, Tennessee, November 14-17th. A scientific program of unusual interest in all sections has been prepared and a record-breaking attendance is expected. The committee on local arrangements in Memphis has promised a most enjoyable program of entertainment. Members of the Florida Medical Association will no doubt attend this meeting in large numbers. The growth of the Southern Medical Association in the past few years has been phenomenal and without doubt, this Association's program is second to none of the general association meetings.

CERTIFICATES OF REGISTRATION

Applications for Certificates of Registration are not being received by the State Board of Health in as large numbers as is desired. It is estimated that 2,000 doctors of medicine, 156 osteopaths, 157 chiropractors and 93 naturopaths will expect to register and secure their official Certificates of Registration as provided for in Chapter 12005, Laws of 1927. As this publication goes to press, 493 applications, properly completed, have been received from doctors of medicine, 41 from osteopaths, 22 from chiropractors and 24 from naturopaths. It is believed that a total of 2,406 will expect to register. It would appear that a total of 580 is not a very good representation of what should be expected at this time. It is hoped that those who wish to receive Certificates of Registration by the first of January will forward their applications immediately.

The new registration law which has been sponsored by the Florida Medical Association and the State Board of Medical Examiners was passed in order to protect the practice of the healing arts in the state of Florida. The full cooperation of all concerned is, therefore, expected as it is to the advantage of every properly licensed practitioner to secure his Certificate of Registration by January first and thus be in a position to exhibit his authority for claiming to be a licensed practitioner.

A number of doctors have made inquiry as to whether or not they are required to register in event they are licensed but not practicing in the state of Florida. An opinion on this point has been secured from the Attorney General which reads in part as follows:

"The purpose of this registration seems to be mainly to preserve information as to the whereabouts of the physicians licensed to practice rather than a registration of those physicians actually engaged in practice. The statute says that all those licensed to practice who at the time the statute was enacted were lawfully en-

gaged in the practice of medicine should register annually as required in the Act. If a person applies for a license to practice medicine and engages in some other occupation he would probably be exempt from registration under the Act by notifying the jury to that effect."

It has now been a month since application blanks were mailed. If you have not already done so, you should send in your application at once in order to prevent congestion at the central office. Beginning the first of January, Certificates of Registration will be mailed out in the order in which the completed applications were received.

THE AMERICAN BOARD OF OTOLARYNGOLOGY

In 1924 the American Otological Society, the American Laryngological Association, the American Laryngological, Rhinological and Otological Society, the American Academy of Ophthalmology and Otolaryngology, and the Section on Laryngology, Otology and Rhinology of the American Medical Association, each appointed two members, making a total of ten members, to constitute the first American Board of Otolaryngology. Because of the character and standing of its members, no one questions the authority of the Board. In spite of this fact, the last bulletin published, shows a conspicuously small number of certificates issued in Florida. The time has come when all otolaryngologists should be certified by this Board.

Few have not been told of its existence and some haven't been reminded of its meetings, because they were frequently held at distant places. The next meeting will take place Monday, Nov. 14th, in Memphis, during the meeting of the Southern Medical Association.

Members of the Florida Medical Association specializing in otolaryngology, should make their applications promptly in order to be certificated at this meeting.

*Have you received your 1927 Membership Card?
If not, write for it. Box 81, Jacksonville, Florida*

STATE NEWS ITEMS

Dr. A. H. Freeman of Ocala, spent his vacation in the mountains of North Carolina, going to St. Louis, where he spent two weeks attending clinics.

* * *

Dr. A. J. Balkins, formerly of Orlando, has recently moved to Washington, D. C., where he is connected with the Washington Sanitarium at Takoma Park.

* * *

The Escambia County Medical Society held its regular monthly meeting at the State Board of Health Laboratory, Pensacola, Tuesday, October 11th.

* * *

The regular monthly meeting of the Sarasota County Medical Society was held October 11th. Dr. Joseph Halton gave an interesting talk on his recent trip abroad. Dr. C. B. Slocumb of Sarasota read a paper on "Malaria in Childhood."

* * *

A Medical Arts building has recently been opened in St. Petersburg.

* * *

Dr. P. A. Brinson, who for the past twenty years has been practicing at Havana, has recently located at Baldwin, where he will be associated with his brother, Dr. W. D. Brinson, in practice.

* * *

Dr. J. R. Chandler of Daytona Beach has recently returned from a three-weeks' vacation in the north.

* * *

Dr. and Mrs. J. Hugh Fellows of Pensacola recently returned from a motor trip to Washington, Baltimore and New York. In New York Dr. Fellows spent some time doing special work in pediatrics at the Children's Hospital.

* * *

The new City Hospital at Tarpon Springs is now in full operation, Dr. E. W. Burnette serving as chief of staff.

* * *

Dr. W. C. Payne of Pensacola was recently elected a Fellow in the American College of Surgeons.

* * *

Additional X-ray equipment is being added to the Mound Park Hospital, St. Petersburg.

(Continued on page 250)

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Dr. J. L. Kirby-Smith of Jacksonville recently returned from Boston, Massachusetts, where he attended the annual meeting of the American Society of Tropical Medicine at Harvard University. Dr. Kirby-Smith read a paper, on invitation, on "Creeping Eruption."

* * *

Dr. M. M. Harrison of Palmetto recently met with a motor accident but incurred only minor injuries.

* * *

The Pinellas County Medical Society recently elected the following officers: President, H. L. Putnam; vice-president, H. W. Wade, St. Petersburg; second vice-president, H. E. Winchester, Dunedin; secretary, O. O. Feaster; treasurer, W. G. Post, and censor, C. A. Williams, St. Petersburg. The president appointed the following standing committees: Scientific Committee: R. H. Knowlton, T. B. Echard, R. K. O'Brien, St. Petersburg, and H. O. Brown, Clearwater. Publicity and Welfare: F. S. Jennings, G. M. Lochner, St. Petersburg, and M. A. Nickle, Clearwater. Public Policy and Legislation: L. A. Wylie, A. J. Wood, St. Petersburg, and L. B. Dickerson, Clearwater. This society is now enjoying the fifteenth year of its organization. Dr. O. O. Feaster has served as its able secretary for eight consecutive years.

* * *

Dr. J. H. Bickerstaff of Pensacola who has spent several months in Vienna doing post-graduate work, is expected home this month.

* * *

Dr. B. B. Sory has located permanently in Lake Worth.

* * *

Dr. G. H. Edwards of Orlando recently underwent an operation for the removal of his tonsils at the Orange General Hospital.

* * *

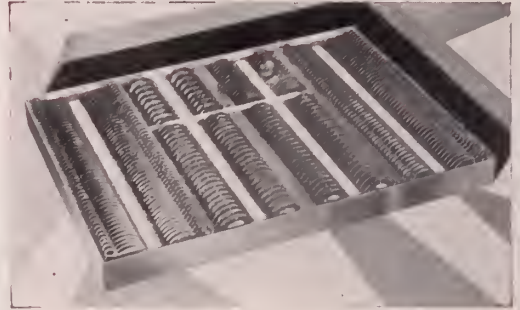
The many friends of Dr. Louie Limbaugh, president of the Duval County Medical Society, Jacksonville, will learn with deep regret of the loss of his father, Mr. R. W. Limbaugh, who died October 27th in Jacksonville.

* * *

Dr. J. D. Raborn of St. Petersburg, a member of the State Board of Medical Examiners, is moving his office to Panama City.

(Continued on page 252)

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J. H. MILLS, M.D.,

Superintendent

Phone 2734

Dr. and Mrs. M. E. Quina of Pensacola returned recently from a trip to the north. Dr. Quina attended the meeting of the American Academy of Ophthalmology and Otolaryngology held in Detroit. * * *

Fifty-seven physicians qualified to practice medicine in Florida by passing the semi-annual examination of the State Board of Medical Examiners held in Tampa, June 13th and 14th. Dr. W. M. Rowlett reported recently. Sixty-five applicants for licenses from eight states took the examination. The number of failures, eight, was unusually small, Dr. Rowlett stated. The names and addresses of successful applicants are: Theodore M. Trousdale, Richlands, Va.; Jose A. Dominguez, Tampa; E. R. Harris, Lithia; K. C. Thomas, Miami; Edward Julian Sunday, Pensacola; William H. Butler, Atlanta; Thomas W. Rush, Cincinnati; Parke G. Smith, Cincinnati; Charles E. Creel, Clopton, Ala.; A. R. Haisfield, Pensacola; H. W. Brann, Chicago; F. E. Daves, Chattahoochee; John Harlan Owens, Ashland, Ala.; William Brewer, Everglades; Warren A. Harrison, Fort Myers; Julius Doar Johnson, Miami; Randall O'Rourke, Miami; Kenneth Phillips, Miami; John A. Phipps, Miami; Thomas A. Snow, Birmingham; T. Allen Jones, Sanford; H. C. Myers, Philippi, W. Va.; John Henry Mitchell, Jacksonville; Annette Mebane Bieker, St. Petersburg; J. Rufus Johnson, Pensacola; D. G. Humphreys, Fernandina; Alfonso F. Massaro, West Tampa; Alfred Theodore Eide, Haines City; Alvord L. Stone, Maitland; De Vilo O. Todd, Trafford, Pa.; Harry C. Evans, Tampa; W. B. Clark, Blountstown; Olen B. Hazen, Brooker; J. Arch Avery, Atlanta; W. L. Pomeroy, Atlanta; J. William Jones, Atlanta; J. V. Avera, Gainesville; Claude Anderson, Orlando; Charles W. Peace, Tampa; O. D. Lennard, Fort Pierce; W. B. Brigman, DeLeon Springs; G. H. Starke, Hawthorne; L. C. Starke, Hawthorne; V. M. Jared, West Palm Beach; Nixon D. Bryant, Jacksonville; M. C. Wilensky, Jacksonville; W. S. Nichols, Lake City; P. J. Glass, Miami; H. C. Kluever, New Orleans; R. E. Summit, Orlando; Gordon H. Ira, Jacksonville; Hubert H. Blanchard, Harlem, Ga.; F. E. Kitchens, Coral Gables; John Pitt Tomlinson, Jr., Lake Wales; Waldo Horton, Winter Haven; Lydia Allen DeVilliss, Miami Beach.

(Continued on page 254)

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At the October 13th meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society held at Chattahoochee, the following officers were elected for 1928: President, H. E. Palmer, Tallahassee; vice-president, B. F. Barnes, Chattahoochee; secretary-treasurer, F. Clifton Moor, Tallahassee. Dr. H. E. Palmer was elected delegate to the state convention. The next meeting of the society will be held at Tallahassee on the second Wednesday of January, 1928.

* * *

Dr. B. W. Lowry, Tampa, secretary of the Hillsboro County Medical Society, has returned from a three months' trip to Europe.

* * *

Dr. L. A. Wylie of St. Petersburg was recently made a Fellow in the American College of Surgeons.

* * *

Dr. and Mrs. E. J. Melville of St. Petersburg recently returned to their home after a three months' vacation spent at St. Albans, Vermont.

* * *

On October 21st, the Pinellas County Medical Society held its annual ladies' night at the Shrine Club in St. Petersburg. Dr. H. L. Putnam, president of the society, was toastmaster, and Dr. R. H. Knowlton, chairman of the committee on arrangements. Dr. G. E. Miller rendered a vocal selection. Short talks were made by Drs. O'Brien, Feaster and Anderson. A very enjoyable dance concluded the evening's entertainment.

* * *

The regular meeting of the Suwannee River Medical Society was held at Lake City on October 14th. Dr. W. M. Shaw of Jacksonville presented a paper on "Spontaneous Pneumothorax" and illustrated his remarks with lantern slides. Clinical cases were presented by Drs. Harkness, Bates and Dyer of Lake City. Dr. Ives, Lake City, discussed several cases of scarlet fever treated recently by him with vaccination. Dr. L. M. Anderson of Lake City celebrated his birthday on this occasion and the meeting was enlivened by the presentation of a birthday cake to Dr. Anderson by the members of the Society. Dr. Anderson is one of the pioneers of the Florida Medical Association.

(Continued on page 256)

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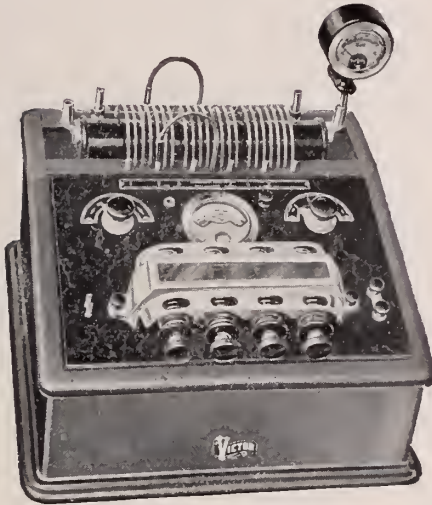
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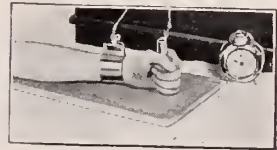


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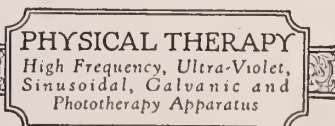
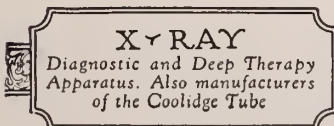
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The Lake County Medical Society held its October meeting in the dining room of the Biltavern Hotel, Tavares, on October 6th. The meeting was well attended.

* * *

Dr. S. C. Colley of Tavares has returned from a trip to New York City, where he spent much time attending clinics.

* * *

The following resolutions were recently passed by the Dade County Medical Society:

"The legacies most treasured by a country are the records of the faithful, honorable lives of her departed sons. 'Ill fares that land fast hastening to decay, that contains few such chronicles.'

"Therefore it is fitting that in this busy day we should stop for a moment in honor and respect to the memory of a departed member and fellow practitioner, an early pioneer and one of the first members of the Dade County Medical Society.

"The subject of this sketch, Dr. W. S. Gramling, a resident of Miami for twenty-seven years, was called hence on September 8th, 1927, at Battle Creek, Michigan, where he had gone in search of health, at the early age of fifty-five years. It is not for us to question the reason, as an all-wise Providence has seen fit to remove our brother, but we shall miss his face and cheerful manner.

"Dr. Gramling was born in Greenville, Alabama, and was graduated from the University of Alabama, Medical Department, coming to Miami in 1900, where he was actively engaged in practice up until one year before his death, when, his health beginning to fail, he spent most of his time at Craig Healing Springs in Virginia, where he was very much interested.

"For several years he served the State and his profession as a member of the Florida Board of Medical Examiners.

"During the World War, he was stationed at Camp Gordon, Atlanta, Georgia, where he served as a surgeon in the United States Army.

"We miss him. To his widow and son we extend the sympathy of our County Medical Society.

D. W. HARRIS,
ROY J. HOLMES,
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Committee."

(Continued on page 258)



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Drs. Herman H. Harris and William W. Kirk of Jacksonville have recently moved their offices into the new Greenleaf and Crosby building on the corner of Laura and Adams Streets, Jacksonville.

* * *

Plans for establishing a medical clinic at Vero Beach have been started by the Chamber of Commerce, Vero Beach.

* * *

Dr. Earl C. MacCordy has removed his office to the Medical Arts Building, 7th Avenue at 11th Street North, St. Petersburg.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., published Monthly at Jacksonville, Florida, for October 1, 1927.

STATE OF FLORIDA,) ss.
COUNTY OF DUVAL,)

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Shaler Richardson, M.D., who, having been duly sworn according to law, deposes and says that he is the Editor of the JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Publisher, Florida Medical Association, Inc. Post office address, Box 81, Jacksonville, Fla.

Editor, Shaler Richardson, M.D. Post office address, Box 81, Jacksonville, Fla.

Managing Editor, none.

Business Manager, Stewart G. Thompson, D.P.H. Post office address, Box 81, Jacksonville, Fla.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.)

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3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

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5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is _____. (This information is required from daily publications only.)

SHALER RICHARDSON,

(Signature of editor, publisher, business manager, or owner.)

Sworn to and subscribed before me this 1st day of October, 1927.

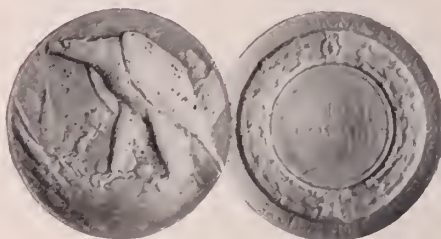
(SEAL)

S. G. THOMPSON,
Notary Public, State of Florida at Large.
(My commission expires April 2, 1928.)

Form 3526.—Ed. 1923.

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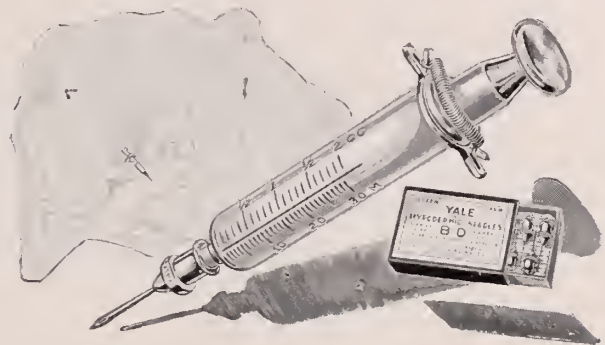
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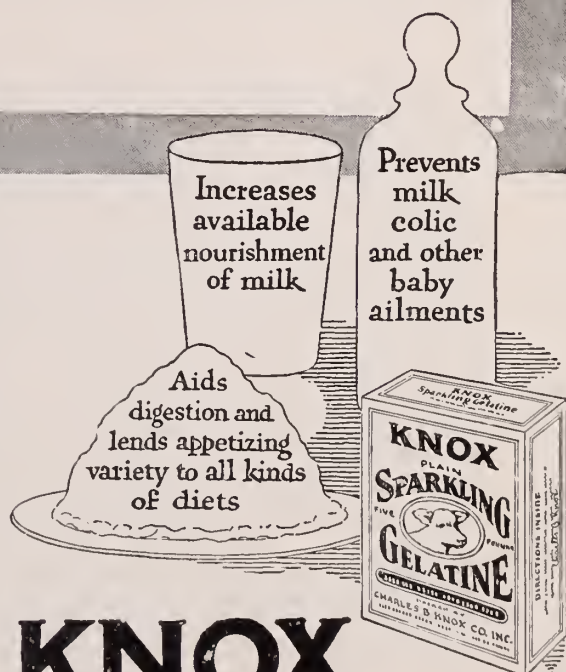
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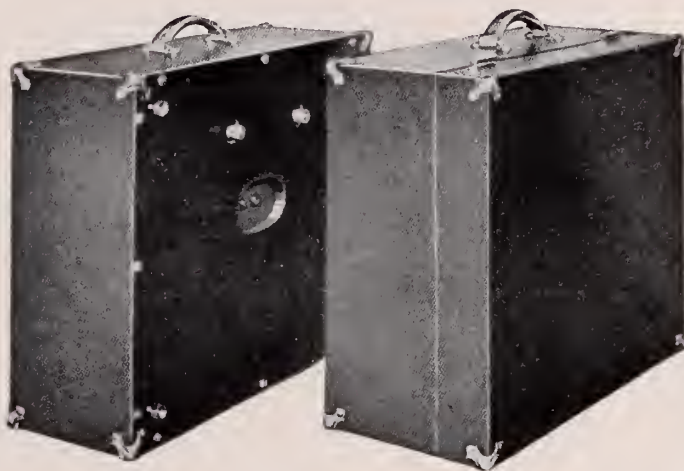
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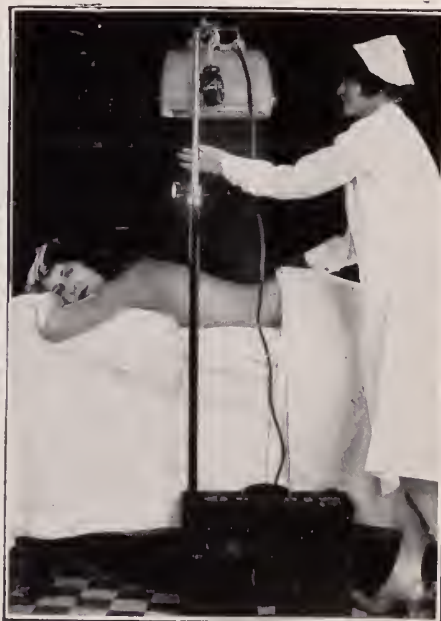
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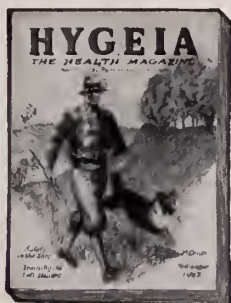
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*Extract from the August, 1927, issue
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- 1.5 per cent. total protein

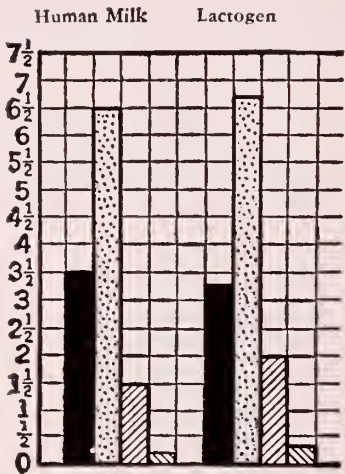
The first aim in the modification is to make the chief nutritional elements in the food prepared from cow's milk correspond grossly to the nutritional elements in the human milk. The protein must be reduced, the sugar increased, and the fat reduced even slightly below that usually found in mother's milk, as the child's digestive capacity for cow's milk fat is less by from 15 to 25 per cent. than it is for human milk."—Dr. Charles G. Kerley in "THE PRACTICE OF PEDIATRICS," Page 68.

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—DR. HOLT, Page 178.

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—DRS. McLEAN and FALES, Page 162.

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CHRONIC NEPHRITIS*

SPENCER A. FOLSOM, M.D.,
Orlando.

The term chronic parenchymatous nephritis is ordinarily applied to a variety of renal affections such as chronic diffuse nephritis, amyloid kidney and cases of so called nephrosis. Covering such a list of affections it can readily be appreciated that treatment directed toward the general term will certainly not be effective. We should make it unanimous and abandon the term chronic parenchymatous nephritis because it signifies nothing according to our present day concept of renal disease.

Nearly one hundred years ago Bright's original thesis was published in Guy's Hospital Reports. Since that time the pathologic, histologic and clinical classifications of nephritis have been legion; too numerous in fact, because based on nothing that was definite and easily applied clinically.

In a paper of this type, with time limited, it is impossible to discuss nephritis in its entirety, but I will attempt to give a practical working classification and then discuss separately the types of chronic nephritis exclusive of the so called interstitial variety.

Chronic nephritis (the old chronic parenchymatous type) can be classified as follows:

1. The non-inflammatory type.
 - (a) Chronic nephrosis (pure form.)
 - (b) Chronic nephrosis (endocrine form.)
2. The inflammatory type.
 - (a) Chronic diffuse nephritis.
 - (b) Chronic hemorrhagic nephritis.

THE NON-INFLAMMATORY TYPE

To Epstein we are greatly indebted for the elucidation of the salient facts relative to this type. He well states that the renal disturbance is but one of a number of phenomena due to a common cause, namely, a systemic disorder of a metabolic character.

It is very often almost an impossibility to distinguish it from other forms of chronic nephritis but it is well to remember that it has certain characteristic features that are definite.

True nephrosis is believed today to be associated with constitutional disturbances, thyroid disturbances, lues(?), tuberculosis, chronic infections and lately it has been stated it is due to staphylococcic infections. It stands in etiologic relationship to the pregnant state. Relatively young persons and occasionally children are affected. Its marked incidence in the poor suggests a nutritional factor whereas its association with pregnancy and hypothyroid states places it in the realm of endocrine disorders.

Pathologically we know that it is a degenerative process of the renal tubules. Since there is some confusion due to a certain lack of knowledge of the pathologic processes we may place them in two classes, (1) the general, and (2) the local.

Of the general processes the most important ones are: the marked changes in the blood, the edema, albuminuria, oliguria and change in the basal metabolic rate. When we find a lowered metabolic rate we classify the nephrosis as an endocrine form. This endocrine form, except the lowered rate and the appearance sometimes of the signs of myxedema is similar in all other respects to the pure type of nephrosis. The changes in the blood are: the increase of the lipid content, decrease in protein of the blood-serum and the inversion of the normal albumin-globulin ratio. The normal cholesterol usually varies from 0.175 to 0.225 per cent whereas in nephrosis it runs to a height of from 0.300 to 1.300 per cent. The protein of the blood serum is normally 6-8 per cent and the ratio of albumin to globulin is 2 to 1, the globulin forming 37 per cent of the total protein. In nephrosis the total protein of the blood serum will average as a rule 3.928 per cent and the ratio of albumin to globulin 0.466 per cent of albumin to 3.426 per cent of globulin; the globulin thus forming 89.2 per cent of the total protein.

The output of urinary substances may be normal early in the disease but functional tests show renal deficiency indicated by the retention of chlorides, of nitrogen and diminished P. S. P. excretion. Water retention may occur even in the pre-edematous stages. When edema becomes marked we have a general anasarca with effusions into the serous cavities. In the ede-

*Read before the Fifty-fourth Annual Meeting, Florida Medical Association, West Palm Beach, April, 1927.

matous cases the retention of chlorids and nitrogen (as measured by test diets) may be quite evident, but the blood fails to give evidence of such retention.

Even early in the disease the albuminuria is pronounced and the daily excretion may rise as high as 50 gm. Casts may be present or absent and the urine is free of all blood elements. The blood-pressure is not found elevated. As the disease advances the edema develops and the oliguria may be so evident that only 300 cc. of urine is excreted in 24 hours. Cardio-vascular and retinal changes are conspicuous by their absence. The former when found are usually extra-renal. Although pallor is pronounced, the fall of hemoglobin and erythrocytes is not great as in the chronic diffuse nephritis.

Briefly, to summarize, we ask the question, what is the disease? It develops insidiously with such subjective symptoms as headache, dyspnea and emesis, chronic course, edema, anasarca, effusion into the serous cavities, marked albuminuria with or without casts, no hematuria, oliguria, absence of cardiac hypertrophy and hypertension, reduction in protein content of the blood, inversion of the albumin-globulin ratio, increase in blood lipoids and a reduction in the basal metabolic rate in the endocrine form.

Relative to the endocrine form we might state that the rate of the endocrine glands in the pathogenesis is uncertain. Premature menopause is not unusual and such cases show a tendency to hypertension. Some of the cases at least represent a condition which is not purely renal in origin. However, in this form low basal metabolic rates are the rule.

The treatment of the pure and the endocrine nephrosis has three purposes to fulfill; first, to increase the protein content of the blood and thus restore its osmotic power; second, to remove the excessive lipoids; thirdly, to supply thyroid extract or thyroxin (Kendall) to raise the metabolic rate. Protein foods, preferably those free from fats and lipoids, such as whites of eggs, washed casein, oysters, lean fish and similar proteins are given in sufficient amount to average $1\frac{1}{2}$ to 2 gm. per kilo of body weight and this may be increased up to $2\frac{1}{2}$ to 3 gm. per kilo. Fat is entirely eliminated as long as the lipoidemia persists. After its subsidence, lipid-containing protein foods of the animal type, such as beef, ham, chicken, etc., are allowed.

The amount of carbohydrate is limited in order to promote the maximum utilization of the proteins and to lessen the production and the retention of water. The diet therefore is a high protein low calorific one. I think it is best to restrict salt to 2.5 gm. in 24 hours and enough fluid to control thirst. The daily use of ammonium chloride in doses of 10 gm. has proven satisfactory in treating the edema and has certainly rendered some patients edema-free who otherwise would have continued to be markedly dropsical. The endocrine form should be given thyroid extract in increasing doses for effect checked by metabolic determinations.

I am purposely leaving prognosis to the last. After all has been said and done what good can we do for these individuals? That's the vital question and the question they will invariably ask you. The cases usually run a long course, edema is relieved and the tendency is to recovery. They may, but rarely ever, pass into the stage of secondary contracted kidney. If death occurs it is generally due to some secondary infection—most commonly a pneumococcus peritonitis.

THE INFLAMMATORY TYPE

In chronic diffuse nephritis the presence of hypertension serves to differentiate it from chronic nephrosis where it is conspicuously absent. Not only in etiology but also in pathology the latter differs materially from the former.

Here we have a true inflammatory process which affects the glomerulo-tubular structures and represents the terminal stage of an acute diffuse nephritis. Such being the case, there is usually a history of attacks of kidney trouble preceding the development of the chronic process.

The acute type of diffuse nephritis is usually a hemorrhagic inflammation following scarlet fever, acute streptococcic tonsilitis, streptococcic tooth infection and sometimes develops unassociated with any specific etiologic factor. Alcohol excessively in the young adult is playing a great part in its causation today.

Degeneration of the swollen and proliferated cells of the glomeruli takes place when the disease is fully developed; there is a rupture of some of the loops and a subsequent hematuria which is a characteristic of the disease.

After the existence of the disease for some time and the development of hypertension there are secondary arteriosclerotic changes in the renal artery and its branches.

The onset of the disease is well described by Bradford when he tersely states that it may be insidious without symptoms or acute with symptoms. The difficulty of recognizing the condition early is well appreciated by all clinicians and often calls for much persistence and patience.

At this juncture I might mention a case reported by Mix of Chicago. Total duration was fourteen years. Was first seen in November, 1909, with no evidence in the urine until November, 1922, during which time ten urinalyses were done. This demonstrates how reliable any one procedure is and impresses us with the fact that we must be thorough.

Chronic diffuse nephritis presents a number of clinical points which are helpful. Aids to diagnosis are the antecedent history of some infection with acute attacks of nephritis, presence or development of hypertension, cardiac hypertrophy, oliguria, nocturia, intense albuminuria with casts of all types and erythrocytes, low specific gravity of the urine with a tendency to fixation, oedema, pallor and retinitis.

Edema follows oliguria, which in turn is the result of the retention of water. Associated with this is a deficient sodium chloride excretion also. This retention of salt and water is due to, first, changes in the kidneys which cause a reduced capacity to eliminate the substance; and, secondly, where the albuminuria is marked and of long standing and the supply of proteins is not sufficient to meet the metabolic needs and the loss sustained by the albuminuria, the blood will show secondary changes and thus will add an extra-renal agent in the causation of salt and water retention.

There is also a great tendency to the retention of other substances, particularly the products of nitrogenous metabolism, and the blood may show a marked degree of concentration of these.

The chronic diffuse nephritic, with his high diastolic pressure, is usually the successful candidate for so-called uremia.

The development of retinal changes usually foretells the ending of the case in at least 1-2 years unless benefited very much by treatment.

There is a nice equilibrium that is struck in many cases of advanced chronic diffuse nephritis between the systolic and diastolic pressures where both are proportionately high. It has happened so often that I have not failed to notice it. For instance, in one case with a sys-

tolic of 240 mm. Hg. the diastolic was 180 mm. Hg., thus making a pulse pressure of 60 mm. Hg. If we are correct in interpreting the pulse pressure as an index of the cardiac output per beat we have here a nice adjustment on the part of nature so that circulatory defeat does not occur so early.

Before a diagnosis of chronic hemorrhagic nephritis can be made other causes of hematuria must be eliminated. This hematuria occurs most often in children but is seen also in young adults with advanced renal disease. It will sometimes imitate a calculus with pain even to the point of radiation and tenderness in the costo-vertebral angle. The bleeding may be paroxysmal, periodic or continuous.

Treatment must be directed to the factors involved in the condition as deficient renal function occupies the center of the stage. Careful guard must be kept on the excretory power of the kidneys because faulty elimination of waste products may result in toxic symptoms.

Any determinable etiologic factor must be eradicated. In the absence of any very marked accumulation of nitrogenous waste products in the blood (if an intense albuminuria is present) high protein diet may be used to advantage.

If the blood shows retention of these substances then the protein must be restricted. Indiscriminate use of low protein diets should be discouraged without good cause for their use. The blood chemistry should always be used to check the protein quantities in the diet. Where the blood indicates that low protein should be used the diet should consist largely of carbohydrate until the excess of nitrogenous waste products in the blood is eliminated. Where indicated, salt and water should be restricted. The question of giving fats should be largely determined by the lipid content of the blood.

I have secured good results with the use of the group diet as advocated by O'Hare and Vickers where your quantities of protein can be carefully gauged.

A useful adjunct in treatment is the use of glucose solution 50 per cent intravenously. It acts as a muscle food and anti-acidotic; and some very happy results can be secured where it is used judiciously.

I have emphasized nephrosis in this paper because it should be more generally known. If we don't think of a condition we can't diagnose it. This is always true and particularly so in

the differentiation of nephrosis from nephritis.

If I have made the distinction between the two conditions clear my mission here will have been fulfilled.

DAIRYING AND ITS RELATION TO PREVENTIVE MEDICINE*

J. G. DUPUIS, M.D.,
Miami.

Dairying in its broadest scope, covers a branch of agricultural activity that ranks first in monetary investment as well as in importance of service to the great human family. And, in the limited time allotted me, it is my desire to briefly set forth facts that prove beyond a shadow of doubt the nutritive and health-giving qualities to be found in clean, fresh, raw milk, and the important position that it can and does serve in preventive medicine.

Back through the ages, milk has been a recognized food. To the Children of Israel the Promised Land of Canaan was a land "that flowed with milk and honey." In India through the centuries, the cow has been regarded as being a gift from God and, as such, held sacred. Ovid, the Roman poet, held milk second only to nectar, the drink of the gods. So almost from the beginning of time milk has been considered a cure for human ills. The foundation of the human frame, the underwriting of the physical structure of the adult to be, lies in proper feeding, and proper feeding in infancy means milk; milk of the proper nutritional value.

Since the introduction of the Babcock test to science in the year 1890, I fear that many members of our learned profession have been asleep, or, if not asleep, they have at least assumed a very lethargic attitude regarding this beneficent and useful invention. The Babcock test for the butterfat content of milk removed the guess-work from dairying and made it possible to maintain a line on individual animals and to determine exactly the fat nutriment in their output of milk.

It is agreed by the foremost authorities, Holt, McCollom, Shipley, Simmond, Becker and others: that a milk with a low percentage of butter-fat is to be desired and regarded as the proper food for infants and for young children. The writer of this article has for twenty years produced a "Baby Special Milk", which is clean,

fresh, raw, cow's milk, using the Babcock test to maintain a line on individual cows that uniformly produce milk containing 3 to 3.2 per cent butter-fat. And, over this period of years he has a record of healthy, well-nourished children of which he is justly proud. Children, fed with this milk as drawn from the cows, and whose uniformity of growth and physical development has brought joy to the hearts of many parents.

Pasteurization, as brought forth by Pasteur, was a god-send to mankind and a boon indeed to science, and, gentlemen while we of our profession maintained a passive attitude, the "Dollar Milk-man" was quick to seize and commercialize this wonderful service to humanity. Combines, syndicates, and corporations exist with the dollar their sole objective. Where, I ask you, does nutrition or food value enter into their scheme of things? How can milk be bought up here, there and everywhere and with but little or no regard for sanitary conditions, be pasteurized at the source of production, shipped hundreds of miles, then repasteurized, bottled and distributed and still be classed as pure, healthful and nutritious milk? Such milk must be from two to fifteen days old before reaching the home of the consumer. How, then, can any man who has given a thought to the matter even begin to compare that product to a pure, clean, raw milk that reaches the consumer the same day that it is taken from the cow?

However, gentlemen, the day of raw milk is at hand. All over the country authorities are beginning to wake up and give to the clean, raw product the recognition it properly deserves. In Missouri the producers had to resort to the Supreme Court and obtain a ruling therefrom before raw milk could be sold in the city of St. Louis. This court ruled that raw milk was a healthful and nutritious food, and that for children especially it was found to be of greater food value and more easily assimilated than pasteurized milk. Dayton, Ohio, has just emerged from a chaos of ordinances and regulations governing the milk supply for that city and there, too, raw milk has been given its rightful place.

Experienced pediatricians are of the opinion that babies do better on clean, raw milk than on commercially pasteurized milk, and Dr. Maynard Ladd of Boston offers a definite proof of this in an article which appeared in the Archives of Pediatrics for June, 1926. The following table has been extracted from this article, and it

*Read before the Fifty-fourth Annual Meeting, Florida Medical Association, West Palm Beach, April, 1927.

might be well to note that all of these cases were under the care of the Preventive Clinic of the Boston Dispensary and carefully supervised. Also the article shows that babies fed upon clean, raw milk alone, not only escaped scurvy but also developed only the mildest form of rickets. The table follows:

Group 1. Food: Grade A Pasteurized Milk.

Observed for 6.9 months.

Gain in development, 1.7 per cent.

Group 2. Food: Grade A Pasteurized Milk, Orange Juice.

Observed for 7.2 months.

Gain in development, 7.9 per cent.

Group 3. Food: Grade A Pasteurized milk, Orange Juice, Cod Liver Oil.

Observed for 7 months.

Gain in development, 9.5 per cent.

Group 4. Pure, Clean, Raw Milk.

Observed for 6.8 months.

Gain in development, 14.0 per cent.

Gentlemen, with these facts before us, can we doubt for a moment the importance of proper food and proper nourishment, or, in other words, the proper milk as a preventive medicine? Can we, as members of the medical profession, question the fact that the power of resistance to all diseases and ailments peculiar to infants and young children can be increased by the proper food? As honorable members of our profession it is time to wake up. In the interests of our babies and young children, our future men and women, it behooves us to see that they are protected and that the food given to them is the right food, the preventive food. Conditions as they today exist challenge us to get squarely behind a movement to remove commercialism from the mouths and stomachs of our infant population.

Our public welfare and health officials should, and I believe that they do, stand ready to cooperate with us to the fullest extent. But, to obtain real constructive cooperation, the men working out of those offices and under those officials must be intelligent, capable leaders of men, not the arrogant, ignorant, would-be policemen; political parasitic curses upon the tax-paying commonwealth, and whose sole idea of accomplishment is to hinder and obstruct; to make a

bombastic showing which is nothing but a smoke screen behind which they draw down the taxpayer's money. To rid ourselves of commercialism we must rid ourselves of petty politics, and, my friends, when we have done this we will indeed have taken a long forward stride in the application of preventive medicine.

CONGENITAL PYLORIC STENOSIS

J. KNOX SIMPSON, F.A.C.S.,
Jacksonville.

Because of its rarity as compared with other conditions of the gastro-intestinal tract of infants causing food intolerance and vomiting, the condition of congenital pyloric stenosis is apt to be overlooked entirely or until the child has become markedly emaciated, dehydrated, and in very poor general condition. I think therefore that a review of this most important disability might serve to emphasize its place in the list of diagnostic possibilities when we are seeking to explain the refusal of the infant's stomach to retain its food.

The condition is one of a true mechanical obstruction of the pylorus, preventing the exit of food by the normal route and hence accompanied by emptying of the stomach in a reverse direction, in a rather violent manner. The obstruction is due to overgrowth of the circular pyloric muscle between the rather inexpandible peritoneal coat and the easily compressible mucous membrane tube which lines the canal, causing the latter to be thrown up into folds which obstruct the lumen of the canal. There is present also a grossly exaggerated peristalsis which accounts for the visible peristaltic waves, the projectile type of vomiting, and probably also for an exaggeration of the degree of obstruction incident to overcontraction of an hypertrophied circular muscle.

We have then, as you see in these cases, an alteration of both the anatomy and the physiology of the stomach, each tending to exaggerate the other in the nature of a vicious circle; the actual strength and bulk of the muscular coat of the stomach rendering stronger contraction waves possible, the increased work of the muscle giving rise in turn to increase in muscle bulk from work hypertrophy. Which of these two changes antedates the other in the instigation of the process, and what the original cause of this work-bulk imbalance is has been the subject of

interesting speculation since the first description of the malady by Armstrong¹ in 1771.

There has been a great deal of research and experimental work done and many theories advanced concerning the factors involved in the etiology, but no explanation has been supported by incontrovertible facts. That the condition is a congenital one seems to be proven by several reports of the condition being found at autopsy in still-born babies and one case found to exist in a 7 months premature baby.

The diagnosis of a well-established case of pyloric stenosis is rather easy. The problem is to arrive at a diagnosis early in the course of the disease.

Most of the cases occur in male children who are breast fed. The symptoms rarely arise before the baby is two weeks old, nor after it is five weeks old. It is characterized by vomiting of increasing amounts of milk and with increas-

ing violence, a well-developed case vomiting the entire feeding within a few minutes of its reception by the stomach, and at times projecting the vomitus for several feet. There follows scantiness of the stools and then absence of stools, rapid loss of weight, dehydration with its train of symptoms, and death if the condition is not relieved. During the height of the disease pronounced and violent waves of peristalsis are visible, crossing the epigastric region from left to right when food is introduced into the stomach. At times a smooth hard mass, about the size and shape of a pecan, can be palpated in the region of the right hypochondrium, but this cannot always be demonstrated. I was able to feel it in only four of my cases.

Some authorities consider roentgenologic examination of the stomach with the barium meal of considerable help in the diagnosis, others do not think it either necessary or advisable.



FIG. 1—Showing the method of locating the pyloric tumor with the forefinger and lifting it out of the abdomen with the assistance of a blunt hook.



FIG. 2.—Incision is made through the peritoneal and part of the muscular coat in the long axis of the pylorus with the blade of the scalpel. Inset shows thickness of pyloric musculature and depth of incision with knife blade.

Strauss, Abt and Ahrens² at the Michael Reese Hospital in Chicago utilize this method extensively, both in diagnosis and in determining which cases are to be treated medically and which surgically. They state that peculiar rhythmic, snake-like peristaltic contractions in the pylorus, independent of the rest of the stomach, and visible with the fluoroscope, is pathognomonic of this condition. They have also worked out a plan whereby they are guided in treatment by the amount of barium remaining in the stomach after four hours. If more than fifty per cent remains they advise operation; if seventy per cent has passed through, they advise medical treatment. They have used this guide for a large number of cases and have about sixty-five per cent of them to require surgical treatment and thirty-five per cent medical treatment.

As far as I can find in the available literature on the subject, this is the only sustained effort which has been made along scientific lines to establish an arbitrary dividing line between those cases which should be treated medically and those which require operation.

Undoubtedly some of the milder cases are cured medically. There is no less doubt in the minds of those who have operated upon many of these cases that it would be impossible for any type of medical or dietary regime to affect a cure in those cases of highly developed pyloric hypertrophy and complete obstruction.

It is difficult to find accurate figures for comparison of the mortality from the two types of treatment for the reason that most of the cases treated medically, which do not respond to the treatment, were eventually submitted to opera-

tion. A very considerable proportion of these would have undoubtedly been credited to medical mortality, had this treatment been persisted in. Of the few series of cases treated medically

which were available in the literature, the mortality seems to average from thirty to forty per cent. This is less than the surgical mortality was when it was the practice to do a gastro-

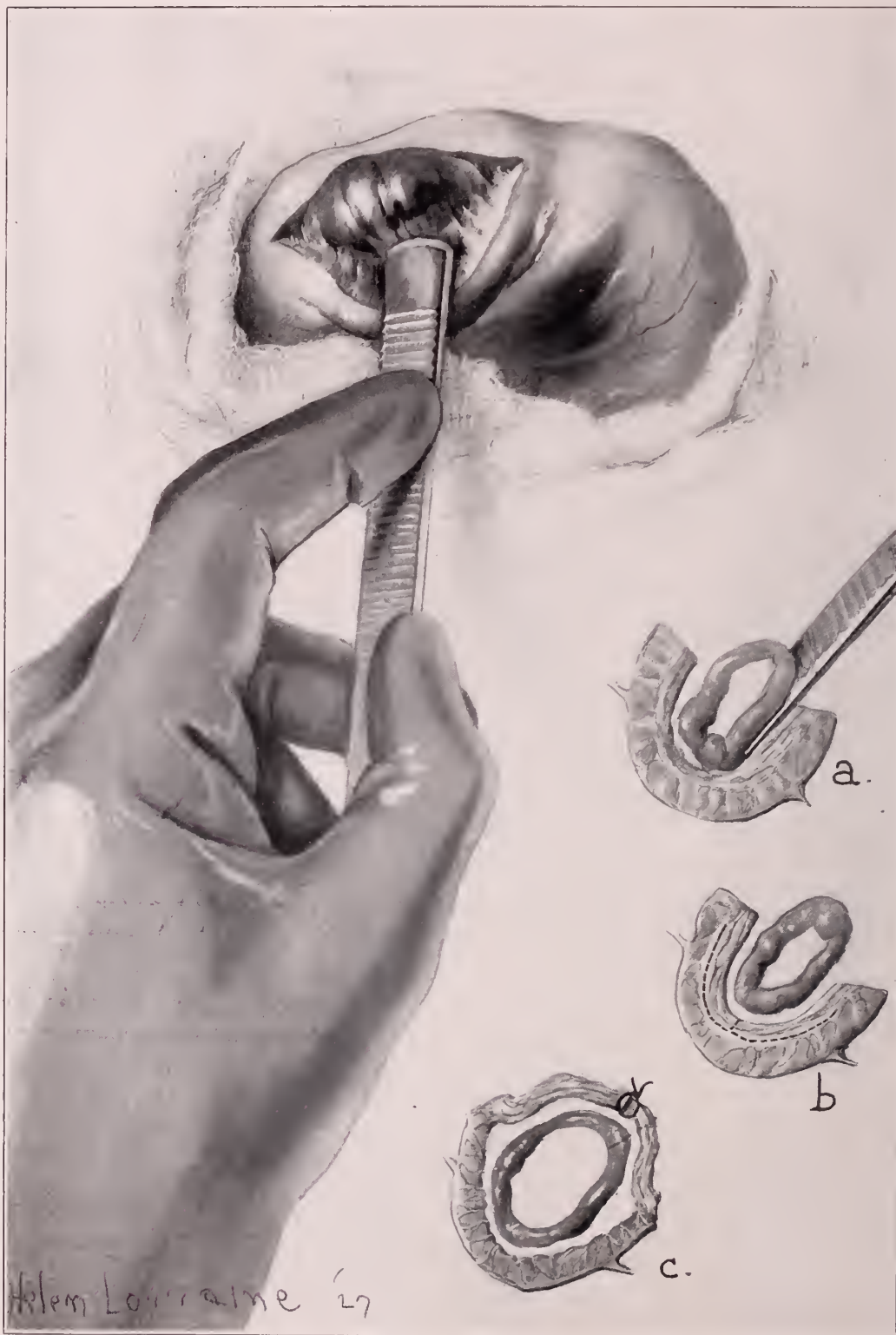


FIG. 3—Showing blunt dissection with handle of scalpel down to mucous tube. Inset (a) shows cross section, indicating extent of freeing of the mucous membrane. Insets (b) and (c) show Strauss' muscle flap brought anterior to the pyloric tube.

enterostomy for relief of the obstruction in these cases, but since pyloroplasty has been the operation of choice, the surgical mortality has fallen considerably. Sauer² in 1924 collected 761 cases operated upon by the Ramstedt technique of pyloroplasty with 12 per cent mortality. In a recent personal communication from Dr. Alfred A. Strauss of Chicago, he states that they have now operated upon 356 cases, doing a pyloroplasty which he devised, and which is similar to the Ramstedt operation, with a mortality of between two and a half and three per cent. This is by far the best record of which I have any knowledge.

The operation which we have done in our small series of twelve cases has been similar to the Strauss method, the only difference being the utilization of a muscle flap in front of the mucous tube which he recommends, and which we have done only once. Our results, however, have been quite satisfactory without this added step. We have had one death in the series, making a mortality of 8.3 per cent. This was a late case, coming in from out of the city, almost moribund at the time. It was one of my early cases, and was regarded as an acute emergency. I would see the wisdom now of delay for 24 hours or more, in order to first combat some of the dehydration and acidosis before doing the operation. These infants should be filled up with water, under the skin and by rectum, before the operation is done, and should never be regarded as an emergency of such gravity that time cannot be allowed for this very necessary procedure.

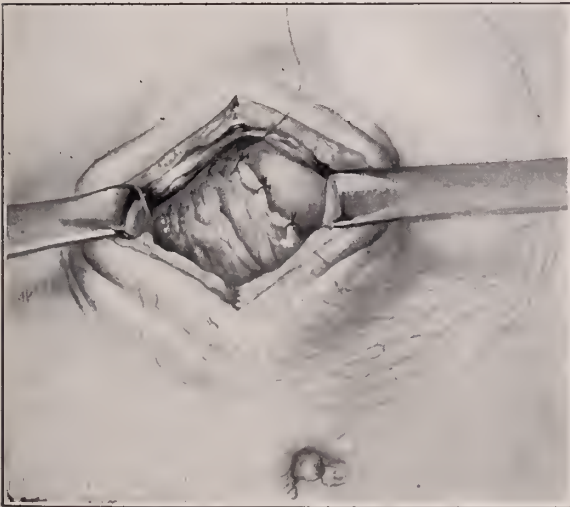


FIG. 4—Showing omentum brought over site of pyloroplasty and tacked in place.

We prefer doing the operation under novocain infiltration anaesthesia, giving the baby a sugar tit to suck during the operation, which serves to divert them and prevent crying, straining and evisceration. We make a very short (1 to 1½-inch) incision in the upper right rectus muscle which, by virtue of its length, tends to prevent evisceration. We then introduce one finger and locate the pyloric tumor, next introducing a hook made from one-half of a sponge forceps, the pylorus is grasped between the finger and the hook and delivered through the wound. The pyloroplasty consists of splitting the muscula-

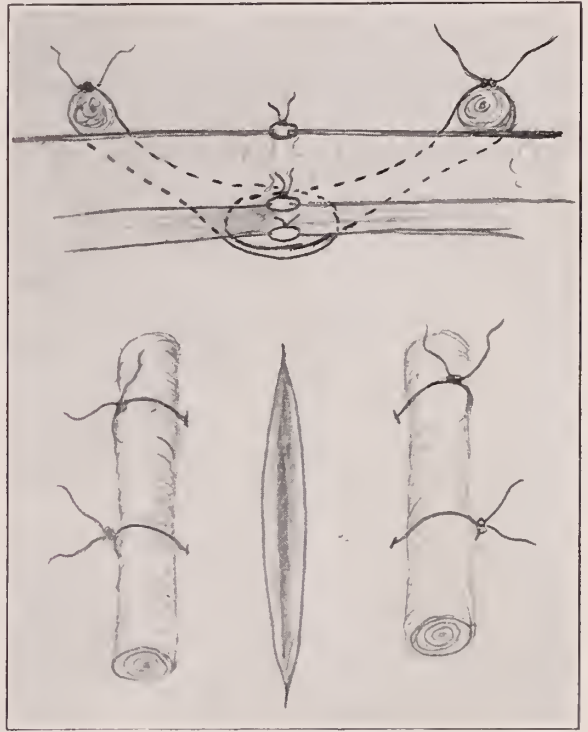


FIG. 5—Showing through and through reinforcing sutures of silk worm gut, tied over gauze rolls.

ture of the pylorus, from the gastric to the duodenal margins of the tumor-like mass. This is done with the blade of the scalpel until about half the depth to the mucous membrane is reached when it is completed with the handle of the knife down to the line of cleavage between the muscle and the mucous membrane. The mucous tube is then separated from the muscle, except at its posterior attachment, by blunt dissection with the handle of the scalpel and the tips of the thumbs. The tube then bulges forward through the split in the muscles. Especial care should be taken against opening into the mucous membrane of the duodenum at the duodenal end of the pyloric incision, where both the

muscle and the mucous membrane are quite thin. This occurred in one of our cases and was evidenced by the escape of a small collection of bile-stained bubbles. It was closed immediately, however, and no trouble resulted therefrom. The omentum is then tacked over the pylorus to prevent leakage and adhesions, the pylorus dropped back into the abdomen, and the wound closed. This should be done very carefully and accurately, using reinforcing sutures because of the retarded healing power present in these emaciated youngsters. The entire operation should not consume more than 25 to 30 minutes. Our shortest one was 15 minutes and they averaged 24 minutes.

Feeding of water should begin as soon as the baby is back in the room, supplemented by administration by rectum and under the breast for the first few hours. Mother's milk should be begun in about six hours, and gradually increased in amount. The cooperation of the Pediatrician is essential to the best results in preparing the child for operation, and in directing the postoperative feeding.

In closing I wish to express my great appreciation to Dr. Love, through whose kindness in referring to me my first three cases of this malady, I became interested in this subject; to Drs. Norwood and May and some of my good friends in the state who have subsequently referred cases of this disability; and to Dr. Buckman, who expended a great deal of time and energy in getting up for me a very complete bibliography, and in abstracting and commenting upon a very considerable part of the available literature on this subject.

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DISPLACEMENT OF THE INTERNAL SEMILUNAR CARTILAGE OF THE KNEE JOINT, AND A CASE REPORT.*

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In injuries of the knee joint the internal semilunar cartilage is far more commonly injured than the external, the ratio being about 9 to 1.

The internal cartilage is more firmly fixed,

and is not allowed the give and take movement of the external. It bears greater strain than the external, and during normal movements of the knee joint often becoming thin and frayed along its internal margin. In the normal relation of the femur to the tibia, the line of force is carried through the inner side of the knee, while the abducted position of the foot when exaggerated produces outward rotation of the leg, also the gliding surface of the inner articular surface of the tibia is greater than the outer, which allows more strain on the internal semilunar cartilage; so we see that the construction of the internal semilunar cartilage is such that it is more liable to strain and injury than the external semilunar cartilage.

CAUSE

The cause of the displacement is: strain thrown on the internal lateral ligament while the knee is flexed, and the femur is rotated inward. In practically all cases the cartilage is displaced inward, and in rare cases a protrusion may be felt on the inner side of the knee joint. This is very infrequent, however, and when felt is due to either bruising and hemorrhage, or to a buckling of the cartilage, which gives an irregular feel to the articular margin.

The cartilage being wedge shaped gets jammed in between the bones, and acts as a foreign body, and causes the so-called "locking" of the knee joint, and it is this internal displacement which gives rise to the acuteness and painfulness of the attack.

SYMPTOMS

(1.) The most constant symptom is that of an inability to fully extend the knee joint, which is most marked in the first injury, and less marked with every attack. This is peculiar to semilunar displacement, and was seen in over 70% of 2,000 cases which were operated by Sir Robert Jones. Great force is necessary to produce this displacement, and a good example is that of a football player being tackled while running with the leg in the abducted position.

(2.) Pain over the articular inner surface of tibia is the next in importance. This is due to strain and some degree of tearing of the internal lateral ligament, and the patient holds his knee joint in a flexed position, which will relieve his pain somewhat.

(3.) Synovitis usually occurs during the first attack and when the surgeon sees the patient a few hours after the accident or trauma causing

*Read before the Dade County Medical Society, June 3rd, 1927.

the displacement, the knee joint is usually very swollen, red and tender.

On examination it will be found that he is most tender over the internal lateral ligament, the inner articular surface of the tibia, and over the anterior horn of the semilunar cartilage. Any attempt to abduct or extend the limb is acutely painful, and it is necessary to get a good history of the mode of production, as it is very helpful.

DIAGNOSIS

- (1.) History of an acute "locking" of the knee joint, following injury to the joint.
- (2.) Pain—as described before.
- (3.) Synovitis.
- (4.) Effusion,
- (5.) Point tenderness over inner articular surface of tibia, and the anterior horn of attachment of the semilunar cartilage.

DIFFERENTIAL DIAGNOSIS

Displacement of the internal semilunar cartilage is often hard to differentiate from the following:

(1.) Synovial fringes.—These sometimes get in between the joint surface, and get nipped and are very painful, but the pain is local in character and does not affect the internal lateral ligament.

(2.) Loose bodies.—These can usually be found and isolated by the patient. They do lock the joint at times, but it is only transitory, the symptoms are sharp but not acute, and effusions are common. The pain is usually referred to one place in joint one time and in a few days it will be in a different place, as the loose bodies may move around in the joint. X-ray is helpful here.

(3.) Lipomata.—Will sometimes lock the joint, there is often a swelling of the joint, but it is usually painless. Pressure on the knee produces no pain.

(4.) Osteomata.—These can be found by manipulation or by X-ray.

TREATMENT

Two types.—(a) Mechanical. (b) Operative. If a patient is seen at once after the accident, the displaced cartilage can be reduced, but we hardly ever see these cases until they have had many recurrences, and have a chronic "locking" and painful knee. If the case is seen at once, there are three things to remember.

- (1.) The reduction must be absolute.
- (2.) All movements of the torn structures must be checked until union is complete.

(3.) No lateral strain must be allowed until the internal lateral ligament has recovered its tone.

(a) Method of reduction.—The surgeon first fully flexes the knee, rotates it inward on the femur, holds it in this position, and then quickly and forcibly extends it. The leg is then put up in the extended position for three weeks, a cast being applied from the thigh to the ankle. After this time the cast is removed, and the patient is instructed to walk, toed in to take the strain off of the internal lateral ligament. Raising the inner side of the sole and heel of the shoe will accomplish this purpose; in addition to this a cage splint for the knee is sometimes used.

(b) Operative treatment. — Two common types.

(1) The small median incision for removal of semilunar cartilage only, or the classical semilunar incision.

(2) The split patella operation—arthrotomy. Devised by Sir Robert Jones.

3½% iodine preparation of the skin is used. Semilunar incision is about 3 inches long, is slightly curved, and extends from an inch from lower internal angle of patella to ½ inch below the tibial margin, with the knee flexed and leg hanging over the edge of the table. The joint is thus opened and the internal semilunar cartilage is brought to view. All of the affected cartilage is then removed, scissors or scalpel being used. The wound is then stitched up layer by layer, and dressings applied with the leg extended to within 10 degrees of full extension. A posterior splint is then applied with the leg in this position; this is kept on for ten days and then the skin sutures and splint are removed. Massage and heat are used daily, and patient is allowed to begin walking.

The split patella operation consists of dividing the patella in the mid-line with a motor saw, and then completing the operation by using a thin osteotome to further divide the patella. The incision extends upwards through the middle of the quadriceps tendon for about five inches, and below through the patellar tendon to the tibial tubercle. The knee joint is then flexed and the patella and tendons are retracted medially and laterally, giving a very good exposure of the whole knee joint. This is probably the best form of arthrotomy when damage other than semilunar displacement has been done, and thorough search of the knee joint is wanted.

CASE REPORT

Patient. Male. Age 35. Well developed and nourished, came in complaining of pain and recurrent swelling and "locking" of the right knee joint for the past year.

Family history. Negative.

Personal history. Usual diseases of childhood, otherwise negative.

Onset: About two years ago he had a fracture of the right femur in an accident, was confined to his bed in a cast for several weeks, and says he had a stiff knee for several months after this. In July, 1926, while running, he turned his ankle and wrenched his knee. He says he heard a distinct clicking and a sudden pain over the internal aspect of his right knee joint. He had several recurrences of the knee "locking" while walking, and it would swell up, as before, and he would be confined to bed for a few days, after which he would again walk, but said his knee felt very unstable.

Examination: His right knee joint is slightly enlarged (one inch in circumference as compared with the left), and he has an inch shortening in his left thigh due to an old fracture of the femur. He can not extend his right knee fully, and there is about 15 degrees of flexion at all times. He has a marked tenderness over the medial surface of his right knee joint, and a definite point tenderness at the attachment of the anterior horn of the semilunar cartilage. There is an increased amount of synovial fluid and a slight puffiness to the skin over the joint surface. He walks with a slight limp on the right side.

X-rays (A. P. and L.) were taken, which were negative (to rule out bony changes in the joint). Usually does not show semilunar cartilage. In view of the history and positive physical findings an arthrotomy was advised.

Operation. A medio lateral incision was made, beginning above the top of the middle of the patella, and then passing around the patella about $\frac{1}{2}$ inch to its medial surface, then downwards to the tibial tubercle below. The upper part of the incision is extended upward and some of the fibers of the vastus interus are cut. The joint capsule was incised at its lower end and the capsule was divided around the patella, keeping about $\frac{1}{2}$ inch away from the patella. The patella is then retracted laterally, and the knee joint then is flexed, giving a very good exposure of the articular surface of both tibia and femur, also of the crucial ligaments and semilunars. The

internal semilunar cartilage was found to be detached from its anterior attachment, and was found to be very frayed and maserated and floating in the joint cavity, attached only by its posterior attachment. It was removed and the knee joint was washed out with normal saline solution and the joint was closed layer by layer, chromic No. 1 was used for the capsule and muscle layers, and split silk worm gut for the skin.

A large dressing was applied to the knee joint, and the patient was required to move his knee joint voluntarily every 2 hours, it was very painful for the first 48 hours, no splint was used.

On the fifth day, the patient was made to sit on the side of the bed, and bend his knee over the edge of the bed. On the eighth day the patient was made to walk by himself without support. He left the hospital on the tenth day after the skin sutures had been removed.

There was very little effusion into the joint after operation, and patient was baked and massaged for two weeks after he left the hospital.

He has recovered entire function of the joint, and walks without a limp.

TAMPA'S NEW MUNICIPAL HOSPITAL THE LAST WORD IN MODERN HOSPITAL CONSTRUCTION*

N. L. SPENGLER, M.D.,

Tampa.

The Tampa Municipal Hospital is located almost within a stone's throw of the business center of Tampa. Located on the northern tip of Davis Island and protected on the north, east and west by waters of the Hillsboro River flowing into Tampa Bay and to the south by Marjorie Park, this hospital has a natural quiet zone. These natural barriers protect the hospital from the noise of traffic, the dust of streets and the necessity of maintaining a quiet hospital zone and protects the patients of this institution from all disagreeable noises and insures to the patients a quiet and perfect resting place which is so much desired in all forms of sickness. No fear of any future development or growth of the city can in any way overcome these natural barriers, so Tampa's new hospital, yet located in the heart of the business center of the city, is still as much isolated from irritating noises as it would be if it were one hundred miles in the country.

*Read before the Hillsboro County Medical Society, Tampa, October 4, 1927.



Tampa Municipal Hospital

On entering the hospital from the main entrance, one is impressed with the spaciousness and regard for the minutest detail to make it a most efficient institution. All floors are covered with a sound-proof material, no woodwork approaches nearer the floor than three inches in any part of the hospital, and all corners in halls, staircases and rooms are rounded, so that there is no opportunity for accumulation of dust in the most obscure corner. Massive doors are located at points in the different wings of the halls of the building, controlling cross-inspection and air currents so that any wing of the hospital can be entirely shut off from any other part, at the same time affording the very best of ventilation. The color scheme in the halls of the wards is soft and mellow and devoid of the usual glaring white walls formerly used in institutions of this kind. Every effort has been made to obviate all unnecessary sounds.

The view from the hospital is very pleasing. To the south is beautiful Davis Islands, and to the west the curves and beautiful scenery along Bayshore Drive, together with Hillsboro Bay; to the north is Hillsboro River and a sky line of the city of Tampa, and to the east is the channel of Hillsboro River forming the entrance of shipping into the city.

The hospital contains five operating rooms. Each operating room is equipped with the latest French operating room lamp, le scialytique lamp—large and small size. These lights are considered the best and most modern of all hospital operating room lighting system; by their use

shadows are eliminated, giving the operator and his assistants full view and a perfect light at all times. On the wall are two clocks which are used in checking and timing all operating procedures. It contains one fracture room for the treatment of all types of fractures and is equipped with a Hawley adjustable table, so that any amount of traction or bending of the limbs necessary to correctly adjust a fracture of any kind, can be secured before the permanent dressings are applied. This is indeed quite important, due to the fact that the advent of the automobile and the many accidents as a result therefrom, is a constant source of many severe fractures.

Complete pathological and clinical laboratories are provided which are absolutely essential to the successful operation of any hospital. These departments will be in charge of men specially trained for this class of work.



Main Lobby and Reception Room

Pathological specimens obtained from any department of the hospital can be immediately referred to the laboratory and in a few hours a full and complete report of the findings will be in the hands of the attending physician. This obliterates the necessity of transmitting these specimens a long distance to the laboratory, as has been done to a great extent in the past. This will be especially helpful, because the final decision of a great many procedures in medicine is not determined until these laboratory findings are in the hands of the attending physician.

Two delivery rooms are provided and each baby is numbered, tagged and a finger and toe



Section of One of the Adults' Wards



Section of One of the Children's Wards

print is made, so that there is no possibility of getting the infants mixed. In connection with these delivery rooms is provided an isolation ward for the mother, should she develop any contagious or infectious disease, and there is also provided an isolation ward for any infant which may develop any contagious or infectious disease during his stay in the hospital. These safety precautions are very essential in any hospital because mothers as well as infants must be well protected from infection, because at this time both mother and infant are more susceptible to infection than at any other time. A special nurse takes care of these infants and if an infection arises another nurse will be provided for the infection and will not be allowed to come in contact with any of the well mothers and babies.

The hospital is equipped with a complete Victory X-ray outfit. Lead floors, walls and ceilings are provided so that there is no radiation of rays from this room, and the specially constructed rubber floors prevent the danger of electrocution

of the operator or patient by any of these machines. Files are provided for all records and X-ray pictures. A complete fluoroscopic room is provided, enabling the attending physician to detect any pathology discernable by fluoroscopic examination. Deep therapy treatment can also be given. Diathermy machines will be provided, if they are not already in position, also ultra-violet ray machines for giving treatments to patients who require electro-therapy.

A special operating room is provided for eye, ear, nose, throat and dentistry. This room is



Section of Sun Parlor, Two of These Sun Parlors Are Provided for Each Floor

likewise provided with a French shadowless lamp for illumination. The largest magnet now manufactured for the removal of particles of steel from the eyes of patients, as well as from any other part of the body, is part of the equipment of this room. This machine is said to be the largest and most powerful of its kind in the South.



Fracture Room. Showing Fracture Table and X-Ray

A full and complete diet kitchen is provided on each floor where the meals for patients are prepared.

Rooms are provided for six internes, including bath, shower, reception room and sun parlors.

The fifth floor of this building is devoted to a nurses' home, with single and double bedrooms, a large reception room and a large sun porch. An entire floor is devoted to quarters for the nurses which will throw a protection around these student nurses and insure complete privacy. This is very important, for if we are to have the highest type girls for training purposes it is necessary that the greatest protection shall be thrown around them.

The fourth floor is devoted to private rooms with and without bath. A large reception room for visitors and a sun parlor is provided for the comfort of these patients and their guests.

A patient leaves his room on a special roller carriage for the operating room. When he is removed from the operating room, he is placed in a bed and returned to his room. This eliminates the unnecessary handling of a patient after an operation.

Six rooms are provided for neuro-psychiatric patients. The glass in the windows of these rooms is of the non-breakable type. The furniture in these rooms is specially built for the

protection, comfort and safety of these patients. It is so arranged that no part can be detached by the patient whereby he might injure himself or his attendants. The doors are so arranged that when closed they can not be opened from the inside. Two large doors are provided in the halls and are likewise controlled by locks from the outside, throwing a double line of safety around these patients. To a casual visitor these precautions would hardly be noticed, as these special arrangements are intricately woven into all the comforts to be secured in a private room. In connection with this department is a special room for the administration of hydro-therapy to this type of patient. Safety devices cover the bath tubs which prevent the patient from fighting his attendants, thereby avoiding force and probable injury to the patient which occur by handling when these special arrangements are not provided. These rooms do not present any of the appearances of the jail type ward so often seen in many institutions.

A room is provided for a complete drug store in connection with the hospital where all prescriptions and drugs for use in the hospital and out patient departments are compounded by well-trained pharmacists. Out patient departments will be provided for all the special branches of medicine, namely, skin, genito-urinary, women,

children, medical, surgical, eye, ear, nose, throat, etc. These clinics will be in charge of men specially trained in that line of work.

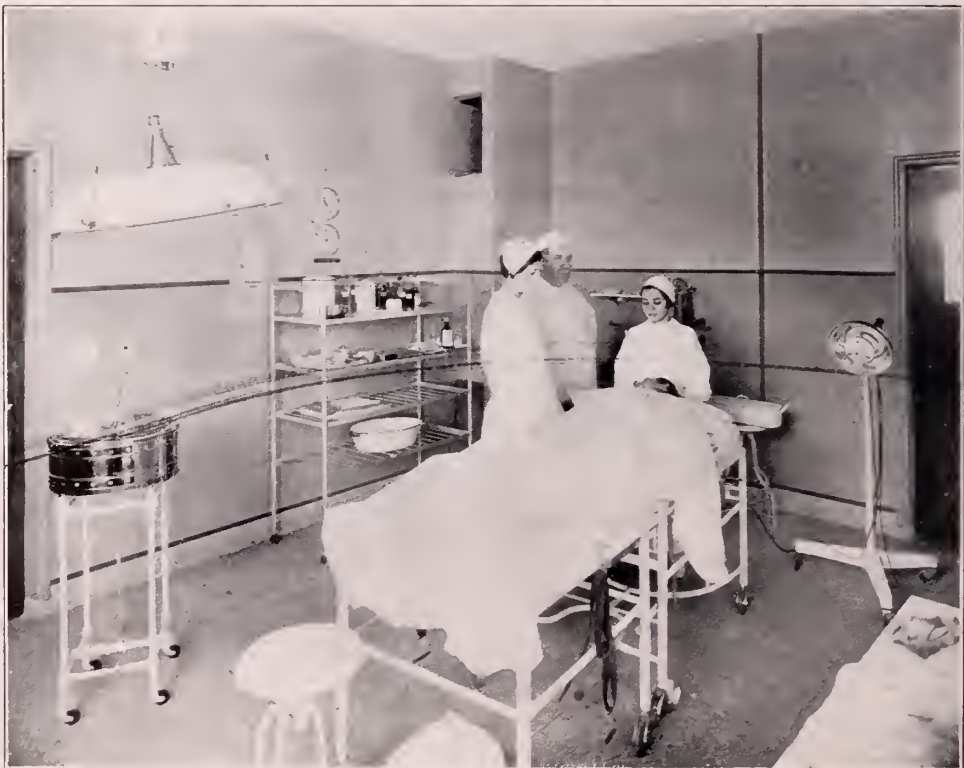
On each floor in the center of the building is the supervising nurse's desk for that floor. She has a commanding view of the halls and by special mirror arrangement can see from her desk the signals as they are flashed by the patients, as well as have at all times under her direct vision the nurses serving her floor. Special lounging room is provided for nurses on special duty, preventing the usual parading, up and down the halls, of nurses when they do not have some special mission to perform.

A silent signal call system is provided throughout the entire hospital. The signal when given by the patient from his bed, is recorded over his bed, his room door, and is flashed on the supervising nurse's desk and is finally recorded and is a part of the day's record in the superintendent's office. This is protection to the nurse on duty, to the patient, to the superintendent of the hospital, and to the doctors, because the fact can be established beyond doubt at any time whether a patient has been neglected or not, or if the nurse fails to answer promptly any call for service by the patient.

Ear phones are provided so that patients at

all times may "listen in" on the radio if they so desire. All switches in the rooms are provided with a radiant center so that nurses in turning on the lights can put their hands directly on the switch and do not have to feel around in the dark trying to locate it.

Four large ward rooms are given to children, six children to each ward, making a total of twenty-four children that can be cared for in these wards. Children are also admissible to any of the patient rooms in this hospital if their parents so desire. Two isolation wards with combination glass and wood partitions for controlling cross-infection is provided for these children. This is very necessary because children are more susceptible to infection than adults; therefore, if we are to hospitalize our children successfully, cross-infection must be controlled, or mortality among our hospital cases will be increased something like 10%. This modern hospital arrangement is desired to throw a 100%—Safety First—care around these children. A special nurse is in care of the isolated wards and is not permitted to come in contact with any of the other children or to permit any air currents to enter the children's ward from her isolation ward. Space is provided for twenty-five infants. The same precautions are



One of the Delivery Rooms



One of the Four Operating Rooms

thrown around infants and if possible a greater degree of precaution than around the older children. A special diet kitchen for preparing the diet of these children is provided for and will be under the direct supervision of a dietician specially trained in the preparation of these foods. This will not only mean a more successful treatment of children in this institution but will mean a better trained nursing staff for preparing food in the homes of children after graduation.

There are two 9-bed ward rooms and two 16-bed wards for adults. All beds are separated by partitions and each bed is supplied by a separate window, which almost makes these wards a private room except they are open on one side. Small windows are cut into the partitions so that convalescing patients may converse one to the other and enjoy the company of other members of the ward. This breaks the monotony and amuses the patients and altogether is conducive to a more contented patient which will mean a more rapid recovery.

A sun parlor is provided for these ward patients and the doors are so arranged that patients can be wheeled to the sun parlor on their beds and enjoy a real outing. Private dining rooms are provided for internes and any doctors, whether

they be visiting or attending physicians, may use this dining room should they be in the hospital at meal time. All nurses and clerical force are served in two main dining rooms from a cafeteria on the first floor. This obviates the expense of waitresses to serve these people.

A special diet room for preparing food for dietetics and sick people in general. In the main kitchen of the hospital are large food conveyors to convey food to diet kitchen on each floor of the hospital. These food conveyors are electrically heated and kept warm while in transit and until food is served. A complete modern equipped bakery is provided for the manufacture of bread. After the bread is baked it is transferred to a large storage tank which is heated and all bread served in the hospital will be served hot. Another storage place is provided for bread which is rat and roach-proof, insuring at all times a food free from contamination. The main kitchen serves the entire hospital. Steam, gas and coal are used for cooking. A special arrangement for cooking vegetables is provided so that they are cooked in about thirty minutes, and by this process all vitamins in these vegetables are preserved. One of the most interesting of all the appliances in the main kitchen is an electric potato peeler which peels two pecks of potatoes in three-

quarters of a minute. A special meat-cutting machine is also provided so that meat can be cut into all sizes, thereby eliminating waste. All these devices, while they necessitate a large outlay in the beginning, will ultimately mean low cost of operation, which spells a saving in the end. An incinerator is provided in the hospital where all waste material is destroyed. A refrigerator for garbage that can not be burned in the incinerator is provided just across the hall from the incinerator. This garbage is placed in the refrigerator in sealed cans and kept at a freezing temperature to eliminate the possibility of any odors that may emanate from this source. Later this garbage is transferred to city service. A complete ice plant is in operation in the hospital, furnishing ice for refrigeration, and a complete frigidaire system has been installed in all diet kitchens of the hospital. A storage refrigerator is provided on the first floor, divided into three sections and entered by a main vestibule where three doors are provided for entrance into each of the three departments, where meat, vegetables, and other foodstuffs are kept separately. The large main storage room is provided which is known as the main supply room or warehouse.

On the right wing as you enter is the historian room and office presided over by an expert spe-

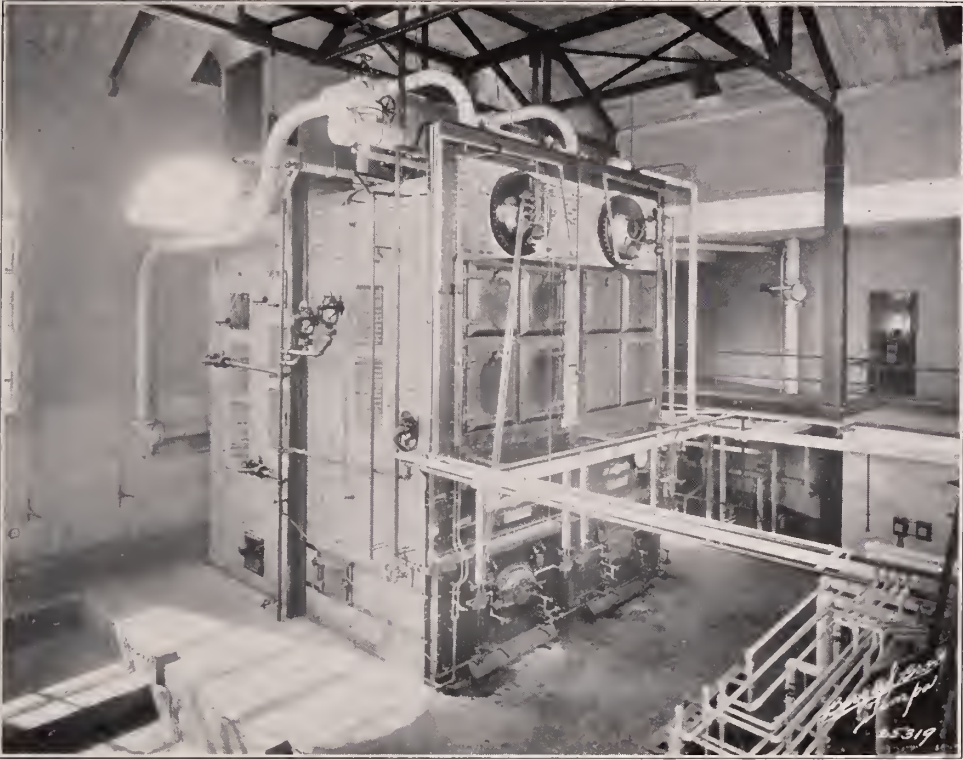
cially trained in the filing of all records of patients in the entire hospital. A nurse's library and reading room is just across the hall. In the basement is the morgue, autopsy room and refrigeration for cadavers. Autopsy plays an important part in the science of medicine today. Once looked upon by the public as a barbarous procedure, it is now recognized as essential in a great many conditions, and may mean an increased knowledge and ability of the doctors handling these cases. He may form some penetrating measures enabling him to render better medical services to the other members of the family. These autopsies are performed in the most scientific and skillful manner and are devoid of the mutilation of any subject.

An emergency room is provided where patients receive first aid, and are then transferred to the preparatory room before being carried to the main operating room.

All measures for the economical operation of the hospital seem to have been provided. All material bought for the hospital must pass into the hospital through one entrance. Opposite this entrance is the main office whose business it is to check all articles which enter the hospital, ship them up to the different departments to which they go and divert such other articles as are



Kitchen



Engine and Boiler Room

carried in stock to a regular storage room for which it is held responsible. A month's food supply is usually kept on hand.

It required two hours' hard work to write down the notes for the above article. This will give you some idea of the vastness of this institution. While we have tried to mention only the outstanding facts we could write indefinitely if we were disposed to go into detail. This building at present is capable of housing something like two hundred and fifty patients.

It is so arranged that units may be added in the future with very little expense and at the same time double the capacity of the hospital, for the ground work of both the hospital, the heating, lighting, water and refrigeration plants are all built with this object in view. The city of

Tampa invites all members of the medical profession of the state to attend the opening of this institution on November 6th, when it will be formally turned over to the city of Tampa by the contractors. This hospital means a great economic saving to the city and surrounding country because of the more efficient and successful medical and surgical services. All patients entering this hospital will have the advantage of all that modern medicine has to offer to the world at this time. Tampa and its citizens should be proud of this institution and should support it with all the vigor possible, for they will at all times be able to point to it with pride and can say that no better institution for the treatment of the sick or injured can be found in the South.

NOTICE!

FIFTY-FIFTH ANNUAL MEETING
OF THE
FLORIDA MEDICAL ASSOCIATION
WILL BE HELD AT
TAMPA, FLORIDA, APRIL 3 AND 4, 1928

EMPHYEMA WITH BRONCHIAL FISTULA—FATAL TERMINATION*

JOHN A. BEALS, M.D.,
Jacksonville.

The hospital liability chosen for discussion this evening is based upon the records, N-2257 and N-2497, of a negro, male, age about twenty-five, first admitted from the out-patient department on March 9, 1927, with the diagnosis of chronic lung abscess with cavity. On April 2nd, he signed a release, being somewhat improved. He was readmitted April 16th and died April 21st.

The patient came to the hospital complaining of pain in the right side of his chest, and cough.

There is nothing of importance in the family or previous history except that three years before admission he had a fistula excised at the old County Hospital.

Detailed information is lacking relative to the onset of the present illness except that three weeks earlier he stopped work because of pain in the right side of chest, increased at deep inspiration, with dyspnea, cough and copious expectoration. The cough, with night sweats, began three months earlier.

The physical examination, by Dr. Hardman, showed the general appearance that of a well-developed and nourished young negro, with severe cough and profuse expectoration. The head, neck, extremities and abdomen are negative except that rectal examination showed a fistula in ano, discharging pus. Examination of the chest is recorded as presenting a symmetrical thorax with slight lagging over the right apex on deep inspiration; impairment of percussion sounds over both apices, but hyperresonant just below the inferior angle of the right scapula; crepitant rales heard at the left fourth interspace near the sternum, and both crepitant and subcrepitant rales over the entire right chest from the fourth interspace downward; tubular breath sounds over an area the size of a silver dollar at the right fifth interspace anteriorly, also below the angle of the scapula.

The heart was found slightly enlarged toward the left.

Dr. Hardman's impression was that of pulmonary tuberculosis, with cavity.

The patient was admitted to tuberculosis serv-

ice and transferred after five days to the general medical service, his total stay in hospital at this time being twenty-three days. During this period his temperature was elevated to levels of 100 and 101 degrees, at first daily, but during the latter ten days it subsided to normal or subnormal at irregular intervals. The pulse was usually eighty or less until the last five days when the range was increased to between 90 and 110. Respirations are recorded as invariably near 20.

On the 6th day of this period a blood count shows 11,000 total leukocytes, with 73% polynuclears. On admission the urine was negative. Six sputum examinations were negative for tubercle bacilli. The Wassermann reaction was found negative.

An X-ray examination of the chest, made the day following admission and reported by Dr. Shaw, indicates marked thickening at the right base, due in part to pleural increase, but with features suggesting encysted fluid, and a circumscribed, rounded area about the size of a dollar, deeply situated in the upper left lobe, the appearance of which suggests a lung abscess.

The progress notes, five in number, indicate gradual clinical improvement. On the sixth day the note mentions the daily quantity of sputum as about a pint and of foul odor. Treatment during this period consisted in rest in bed and sedative cough medicine.

The diagnosis on release was lung abscess, right, signed by Dr. Cason.

The patient was not observed for twelve days, or until April 16th, when he was readmitted, remaining six days, or until his death. Nothing is recorded as to the progress of his condition during his absence from the hospital, but on readmission the notation of Dr. Williams indicates his condition to be much worse, with continued pain in the right chest, cough and profuse, foul expectoration. Pulse and respiration are more rapid during this period: the temperature reaches 102 degrees but is subnormal, during the last three days. He refused most of his food and lost weight and strength rapidly. Treatment at this time again consisted of sedative cough medication. Elevation of the foot of the bed, to facilitate drainage of the lung, was attempted, but the patient refused to continue this, claiming that his difficulty in breathing was increased.

Physical examination on readmission was done

*Presented as a liability report before the Medical Staff of Duval County Hospital, July, 1927.

by Dr. Williams, and showed limitation of respiratory movements at the right base; tactile fremitus decreased at the right base and axilla; hyperresonant below the scapula but dull at extreme right base posteriorly; breath sounds almost absent but tubular in character, amphoric at angle of scapula; crepitant and subcrepitant rales throughout the right chest. Otherwise the physical examination, including the heart, was unimportant. Blood pressure was not recorded at this time. The impression was that of abscess of right lung.

No additional blood counts or X-ray examinations are recorded. The urine showed a trace of sugar.

On the second day after readmission Dr. Swift requested of Dr. Taylor that bronchoscopic treatment for lung abscess be carried out. The request was referred to Dr. Parramore.

Using 10% cocaine as local anaesthetic, Dr. Parramore performed bronchoscopy, noting the presence of "enormous amount of pus expressed from bronchi; mucous membrane red and covered with pus-like secretion, greenish yellow in color; vocal cords thickened and rough." The duration of bronchoscopy is recorded as one and one-half hours. The patient died on the operating table, the apparent cause of death being stated as acute heart failure.

The autopsy, report of which is unsigned, but presumably conducted by Dr. Kirk, who was recorded as present, showed about two quarts of thin, foul-smelling pus in the right chest, collapsing the lung firmly against the hilum; a large, rugged aperture about the size of a silver dollar just below the hilum on the right, pronounced passive congestion and basal edema of the left lung; the heart of moderate size and flabby; spleen enlarged to twice normal size; cloudy swelling of liver and kidneys. Diagnosis: (1) Right empyema communicating into right lung and bronchus. (2) Passive congestion and pulmonary edema left lung. (3) Toxic myocarditis. (4) General cloudy swelling. (5) Acute splenic tumor. Cause of death, empyema and pulmonary edema and toxic myocarditis.

The presentation of a hospital liability such as this, is intended, we believe, to call attention to errors occurring in the conduct of a case, thereby stimulating constructive criticism in the interest of better service to future patients. In no sense is such a presentation to be taken as a castigation of fellow physicians. In this case we

regret that the X-ray department was not more at fault.

The essayist feels impelled to comment favorably upon the recorded history and physical examination credited mainly to the internes, which is sufficiently concise, yet inclusive enough to create a mental concept of this patient's condition. It is regretted, however, that progress noted are few in number, somewhat perfunctory and record nothing of the changes which must have occurred in the physical examination during the many days spent in the hospital.

The diagnosis by the medical department of lung abscess, uncomplicated, was probably correct at first, but the later development of empyema was apparently unsuspected. In the light of the completed record it is easy to assume that empyema should have been suspected, on the basis of increasing illness and changes in the physical signs. A second blood count or reexamination by X-ray should have been of assistance. It is to be hoped that economy of X-ray materials was not a consideration. If a reasonable suspicion of empyema had been aroused, aspiration would have probably settled the question. The failure to diagnose complicating empyema probably reflects the hospital's need for a resident physician of experience with whom the internes come in more intimate contact than is possible for them to do with the visiting staff member whose time is limited for the consideration of any one patient.

Bronchoscopic treatment for lung abscess is, we believe, an effective method and one which the hospital is fortunate in having at its disposal. It is not indicated in the presence of empyema with bronchial fistula, surgery being the preferred treatment, Dr. Parramore probably had no reason to doubt the diagnosis, but may have erred by not refusing to undertake a patient so critically ill. The records, which are probably in error, show the duration of bronchoscopy to be one and one-half hours; an excessively long time for any individual to endure the bronchoscopic tube.

The bronchoscopic treatment, of course, precipitated this patient's death which, perhaps as recorded, resulted from acute heart failure, although there is no antemortem record of a cardiac disease. The mortality emphasizes to us too grave necessity for careful selection of cases to be subjected to this highly valuable, but by no means trifling, procedure of bronchoscopy.

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REHABILITATION OF DISABLED CITIZENS

A disabled person is one who, because of congenital or acquired defects in the use of his body, does not have a normal capacity for education and self-support. It has been estimated that in every thousand people there are six disabled persons throughout the United States. They are citizens of the state the same as you and I, and are entitled to the same educational facilities as our children enjoy. Very few of them have any such opportunity and consequently become wards of the state for life, whereas over 50% of these social and economic liabilities could be made over into self-supporting citizens. Until recently practically nothing was done to relieve these "afflicted" citizens. More progress has been made along this line during the last generation than in all the ages past.

The relief and education of those with physical handicaps must be available if we are to have a real democracy. This need must be emphasized by philanthropic persons or agencies, but primarily it is a state responsibility. Florida has taken several steps towards caring for her disabled citizens already. The State Board of Health has maintained a Crippled Children's Bureau for several years. This department undertakes the correction of physical defects of indigent children under sixteen years of age, and of good mentality. The funds and facilities are unable to meet the demand for service; but it is a step in the right direction. No attempt has been made to train these children in any special vocation or trade. They were left to educate and adjust themselves as best they could.

The State Legislature of 1927 made it possible to go a step further and to train some of these physically handicapped persons into self-supporting citizens, by creating a Division of Vocational Rehabilitation, under the Department of Public Instruction. It is the purpose of this Department to render physically handicapped citizens self-supporting, or to relieve the unemployment of cripples. The aim is to help the cripple out of his dependency rather than help him in it. Any resident of this state over sixteen years of age, with average mentality, and with any physical defect that totally or partially incapacitates him for self-support is eligible for aid. The Department counsels the disabled person in the selection of a vocation, and then helps arrange for a course of training appropriate to the occupational objective. This training may be in some school, on the job, or through a tutor—depending upon the needs of each case. The expense of tuition, supplies, fees and transportation are paid out of rehabilitation funds. Living expenses must be borne by the individual. The funds are derived from a joint state and Federal appropriation. As soon as a disabled person is qualified to perform a suitable occupation every effort is made to place him permanently at work.

At the present time the state does not maintain any hospital for the physical restoration of its disabled citizens; or any vocational training school for the physically handicapped who could be made self-supporting. It is to be devoutly hoped that Florida will soon fall in line with many of the other progressive states which have such institutions.

For more complete information inquiry should be made to:

- I. Supervisor of Vocational Rehabilitation, Department of Public Instruction—Tallahassee.
- II. Bureau of Crippled Children, State Board of Health—Jacksonville.

A STATE TUBERCULOSIS SANITARIUM

The last Legislature appropriated money and outlined plans, whereby the state might be provided with a sanitarium for the treatment of the indigent sufferer from tuberculosis. Up to the present time the Governor has not acted in appointing a board to carry on this work.

Perhaps the Governor does not realize the need for this type of institution, or perhaps things which have appeared more important to him have occupied his attention. It is evident to all physicians who are practicing in Florida that Florida does need such an institution. The patient provided with sufficient funds can be sent to private sanatoria in other states, but the indigent cases of tuberculosis, being rejected by private institutions in this state, constitutes a menace to the rest of the population.

Doctors who have influence with those directing our state affairs can render a great service, not only to the sufferer but to the state at large, if they will bring this matter to the attention of the Governor and urge an immediate appointment of a competent board to choose a site and to erect a state tuberculosis sanitarium.

STATE NEWS ITEMS

Dr. J. H. Fellows of Pensacola was recently the victim of an automobile accident. His injuries were minor ones and the doctor is now out again.

* * *

Dr. Arthur Walters of Miami Beach announces the removal of his office from the Allison Hospital to 337 Lincoln Road, Miami Beach.

* * *

Dr. Samuel E. Field of Lemon City has removed to Centerville, Mississippi, where he will be associated with his brother, Dr. Richard J. Field. They will operate a thirty-bed hospital known as the Field Clinic.

* * *

Dr. C. L. Davis of Okeechobee has recently returned from a several weeks' visit to the clinics of Chicago and Rochester.

(Continued on page 304)

Gainesville's new hospital will be completed the latter part of November. The hospital construction is of all-tile with tile roof and is three stories in height. It has twenty-four private rooms in addition to charitable wards. There will be two operating rooms, one for ear, eye, nose and throat operations and one for general surgical cases. A complete X-ray plant is being installed.

* * *

The following Florida physicians registered at the meeting of Southern Medical Association, recently held in Memphis, Tenn.:

Adamson, W. P.	Tampa
Andrews, C. A.	Tampa
Arms, B. L.	Jacksonville
Beals, John A.	Jacksonville
Blake, Wm. C. (and wife)	Tampa
Bowen, F. J.	Jacksonville
Christ, C. D.	Orlando
Coplan, Milton M.	Miami
Davis, J. C., Jr.	Quincy
Estes, James L.	Tampa
Farrior, J. Brown (and wife)	Tampa
French, Elmo D.	Miami
Gilmer, E. S. (and wife)	Tampa
Hall, John E.	West Palm Beach
Herman, F. Peter (and wife), West Palm Beach	
Jelks, Edward (and wife)	Jacksonville
Lischkoff, M. A.	Pensacola
Love, J. D.	Jacksonville
Langley, W. T. (and wife)	Sanford
Marshall, C. J.	Sanford
Moor, F. C. (and sister)	Tallahassee
Richardson, Shaler	Jacksonville
Rollins, C. D.	Jacksonville
Shaw, E. Clay	Miami
Kirby-Smith, J. L.	Jacksonville
Smith, Marvin H.	Miami
Snyder, J. W.	Miami
Taylor, H. M.	Jacksonville
Turberville, J. S.	Century

* * *

Pensacola has been chosen as the 1928 meeting place of the St. Louis-San Francisco Railroad Medical Society.

* * *

Dr. Thomas C. Thompson has removed his office to occupy suite 318 Hildebrandt Building, corner of Adams and Julia streets, Jacksonville.

(Continued on page 306)

THE GOLD MEDAL COD LIVER OIL



The Sesquicentennial Gold Medal awarded at Philadelphia as a recognition of the high quality of

PATCH'S FLAVORED COD LIVER OIL

At the Sesquicentennial Exposition held in Philadelphia last year the E. L. Patch Co. was awarded the gold medal for "excellence of product."

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The recognition given to our product by the medical profession, after five years of clinical experience, constantly reminds us of our great responsibilities.

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The dose is small—a half teaspoonful for children or a teaspoonful for adults three times a day.

It is pleasantly flavored. Your patient will appreciate this feature.

Let us send you a trial bottle of this "Gold Medal Cod Liver Oil."

Taste it! You'll be surprised!

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The E. L. Patch Co., Stoneham 80, Boston, Mass.:

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Product and Policy

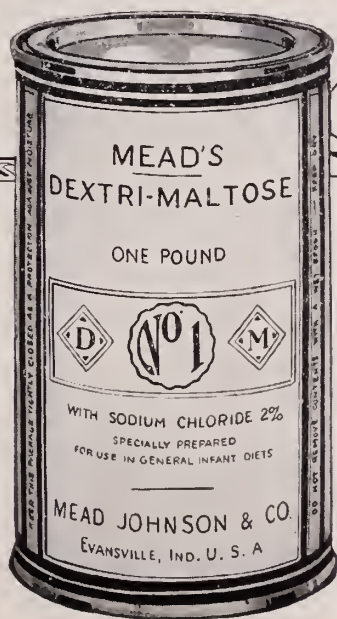
BETTER BABIES

RESPONSIBILITY in infant feeding necessitates unmolested control of the diet.

That Mead's Dextri-Maltose, cow's milk and water has given good results over a period of years in feeding the majority of infants, is due to the policy that entrusts its indication and the control of its use to the doctor alone.

And so it has become known among physicians as a dependable infant diet material to be used in cases where gains in weight are desired, where nutritional disturbances are to be avoided, or where tolerance for sugars has been lowered.

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Pensacola has recently established a hospital for contagious diseases. This hospital has been obtained through the efforts of the Escambia County Medical Society, a building having been given by a citizen of Pensacola who prefers his name to be unknown. The Society is now asking the county to appropriate the sum of \$10,000 for maintenance.

* * *

During the month of November, the Pinellas County Medical Society's scientific program consisted of the following papers:

Pyuria.....Dr. J. F. Cranford

Discussion opened by Dr. S. B. Bieker.

Diseases of the Prostate....Dr. G. Timberlake

Discussion opened by Dr. A. L. Mills.

Pyelitis in Pregnancy.....Dr. B. L. White

Discussion opened by Dr. W. M. Davis.

Refraction.....Dr. J. H. Cooper

Discussion opened by Dr. R. D. Murphy.

* * *

Dr. and Mrs. Frederick G. Barfield of Jacksonville recently returned from a visit to their son, Mr. Billy Barfield, who is a student at Princeton University, Princeton, N. J.

* * *

Dr. J. C. Holley of Milton was recently slightly injured in an automobile accident.

* * *

Dr. Bert W. Caldwell, superintendent of the Municipal Hospital at Tampa, has tendered his resignation to take effect January 1st. His successor has not been named.

* * *

Dr. and Mrs. W. E. Van Landingham of West Palm Beach recently returned from a trip north. While away, Dr. Van Landingham attended the meeting of the American Public Health Association held at Cincinnati.

* * *

Dr. Shaler Richardson of Jacksonville, editor of the Journal, recently attended the meeting of the Southern Medical Association at Memphis, following which he went to Chicago to attend the annual meeting of the Secretaries and Editors of State Medical Associations. This meeting is held annually at the headquarters of the American Medical Association and here the numerous problems that confront editors and secretaries of state medical associations are discussed.

(Continued on page 308)

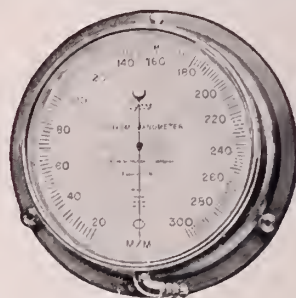


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Medical Director

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Superintendent

Phone 2734

Dr. W. C. Payne of Pensacola has been spending some time in Detroit, New York and Rochester.

* * *

On Armistice day, at 10 o'clock, the State Board of Health met at the State Board of Health building in Jacksonville with Honorable W. S. Cawthon, superintendent of Public Instruction for the State of Florida. The purpose of this meeting was to consider the present outbreak of poliomyelitis in the north and west and to take such measures as are practical for the prevention of such an outbreak in the state of Florida. So far the cases of poliomyelitis occurring in the state of Florida have been of normal proportions and no increase in any section has been reported.

* * *

Dr. and Mrs. W. D. Nobles of Pensacola recently returned home from Cincinnati where they spent ten days.

* * *

On Sunday, November 6th, the Tampa Municipal Hospital was opened for inspection. At 2 p. m. the doors were opened and visitors were conducted throughout the hospital by the medical and nursing staffs and shown every feature in it. It is estimated that 10,000 people inspected the hospital that afternoon. At 6 p. m. a dinner was given by the City Commission to the visiting doctors and medical staff of the hospital. Physicians were present from all over the state. Dr. R. A. Ely, vice-chairman of the staff, was toastmaster at this dinner and talks were made by Dr. J. A. Helms who thanked the Commission on behalf of the Hillsboro County Medical Society for the magnificent hospital which they had constructed, and by Dr. Stewart Roberts of Atlanta. At 8 p. m. the ceremonies of presenting the keys of the hospital to the authorities by the architects were held at the City Auditorium and speeches were made by Mayor Perry Wall, Tom Alexander, chairman of the hospital board, and by Dr. B. Colwell, superintendent of the hospital. The address of the evening was rendered by Dr. Stewart Roberts of Atlanta, who spoke on "Modern Hospitalization of the Sick."

* * *

The first meeting of the recently organized Florida East Coast Medical Association was held at West Palm Beach on November the 10th.

Ninety-seven physicians, representing towns

(Continued on page 310)

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along the East Coast, from Jacksonville to Homestead, registered at the meeting, and the program was one of the best ever presented before a medical body, within the state of Florida.

This Association was formed with the idea of bringing the physicians of this section into closer contact with each other, since the larger number have come into the state within the past three or four years, and have never had the opportunity of knowing each other, personally. This, together with the writing and reading of scientific papers, has the tendency to strengthen organized medicine, by the promotion of good fellowship.

That the organization of the Association met with popular approval was amply attested to, not only by the number attending, but also by the close attention paid to the reading of papers, and by their liberal discussion.

Following the scientific meeting, a dinner was held at the Luzianne Cafe, at which addresses were delivered by Dr. John A. Simmons, President of the Florida State Association, whose subject was: "Medical Fellowship." Dr. W. E. Van Landingham, First Vice-President of the State Association; subject, "Why We Need the Florida East Coast Medical Association." Dr. R. C. Woodard, President of the Dade County Medical Society; subject, "Medicine, Thirty Years Ago, and Today." Dr. Ralph N. Green, of Jacksonville, made an impromptu talk, which received enthusiastic applause.

Following dinner, a dance was held at the Hotel El Verano, which was attended not only by the physicians and their wives but also by a large number of the citizens of the city.

The officers elected to serve throughout the coming year are: Dr. John E. Hall, West Palm Beach, President; Dr. H. A. Walker, Hollywood, First Vice-President; Dr. Arthur L. Walters, Miami Beach, Second Vice-President, and Dr. Roy J. Holmes, Miami, Secretary-Treasurer.

It may be stated that the success of the first meeting may be attributed to the untiring efforts of the Secretary, Dr. Holmes, who is one of the most popular physicians of the entire East Coast.

The next meeting is to be held at Miami, at some date during April, which will be determined later. The meetings of the Association are to be held bi-annually, during the months of November and April.

(Continued on page 312)

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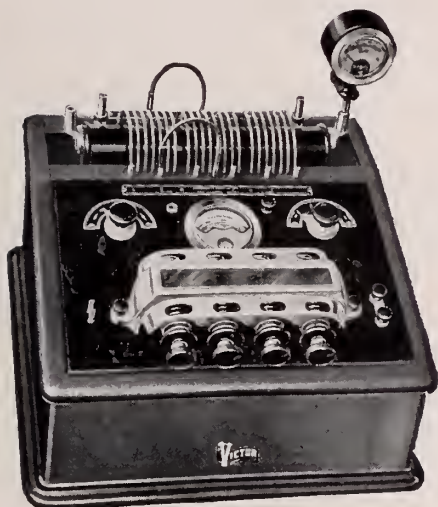
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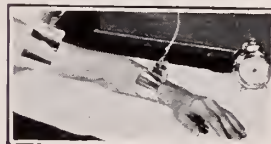
It has proved the ideal solution to the perplexing problem in many a physician's mind. With the Victor Vario-Frequency outfit these factors may be varied, selectively and independent of one another.

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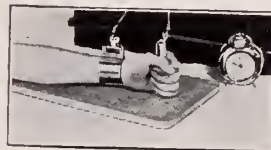


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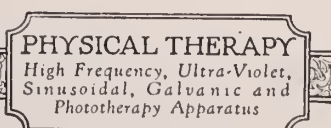
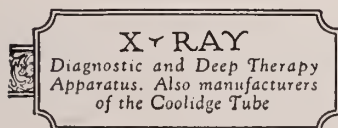
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State licenses for the practice of medicine for six physicians were recently revoked by the Board of Medical Examiners. They are C. C. Faiman, Eugene Hoffman, St. Petersburg; Ed. Roach, Vero Beach; C. W. Page, Chipley; W. H. Pratt, Orlando, and W. H. Stippach, Madison, Conn.

JAMES WALTER STEPHENS

Dr. James Walter Stephens of DeLand died October 10, 1927. Dr. Stephens graduated from the Vanderbilt University School of Medicine in 1887. For a number of years he practiced his profession in Elkton, Kentucky. At one time, he was superintendent of the State Asylum at Hopkinsville. In 1918 he moved to DeLand where he enjoyed an extensive practice. The following resolution was spread upon the minutes of the Volusia County Medical Society.

"Whereas, it has pleased Almighty God in His infinite wisdom to remove from our midst our beloved friend and brother, Dr. James Walter Stephens, and

"Whereas, we, the members of the Volusia County Medical Society feel deeply the loss of our brother and former president of this society, and

"Whereas, his high ideals and valued counsel, the result of years of conscientious effort, will be greatly missed by our members,

"Therefore, be it resolved that the members of the Volusia County Medical Society express their sorrow in the passing of Dr. Stephens, that a copy of this resolution be entered on the minutes of this society, that a copy be sent to members of his family and that the same be published in the local press.

L. B. BOUCHELLE, M.D.,

J. R. CHANDLER, M.D.,

MAURICE E. HECK, M.D.,

Committee."

Dr. John D. Raborn, formerly of St. Petersburg, recently moved to Panama City.

* * *

Dr. E. H. Cowell, formerly of Orlando, has moved to Bradenton, where he has affiliated with the Manatee County Medical Society. Dr. Cowell was formerly a member of the Orange County Medical Society.

(Continued on page 314)



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A meeting of the Southern Surgical Association will be held at the Bonair-Vanderbilt Hotel, Augusta, Georgia, on the 13th, 14th and 15th of December and the following members from Florida will attend the meeting: Drs. John S. Helms, Tampa; John S. McEwan, Orlando; Gerry Holden and J. Knox Simpson, Jacksonville; and E. H. Adkins, Miami Beach. The Southern Surgical Association is the oldest and one of the best surgical associations in America. Membership is limited to two hundred, which membership includes the entire United States.

* * *

Dr. Geo. R. Maner has moved from Zephyrhills to 1803½ 21st St., Tampa.

* * *

A son was born to Dr. and Mrs. O. O. Feaster of St. Petersburg on November 18, 1921.

* * *

Dr. Harold D. Van Schaick of Jacksonville has returned from a visit through the northern clinics of Detroit, Chicago, Rochester and Minneapolis.

* * *

Dr. H. Marshall Taylor, of Jacksonville, was recently elected Chairman of the Board of Counsellors by the Southern Medical Association.

* * *

The American Board of Otolaryngology held an examination in Detroit on September 12th, during the session of American Academy of Ophthalmology and Otolaryngology. One hundred and two applicants appeared for examination, with .107% failures. An examination was held in Memphis on November 14th, preceding the session of the Southern Medical Association, with .127% failures. In the course of the past year, three hundred and sixty-nine applicants have been examined. In 1928, examinations will be held in Minneapolis on June 11th, at the session of the American Medical Association, and in St. Louis, on October 15th during the meeting of the American Academy of Ophthalmology and Otolaryngology. Prospective applicants for certificates should address the Secretary, Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, for proper application blanks.

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THE JOURNAL

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"SCIENCE." January, 1926.



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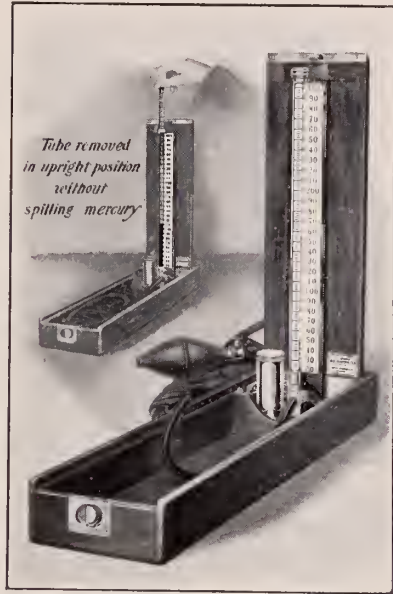
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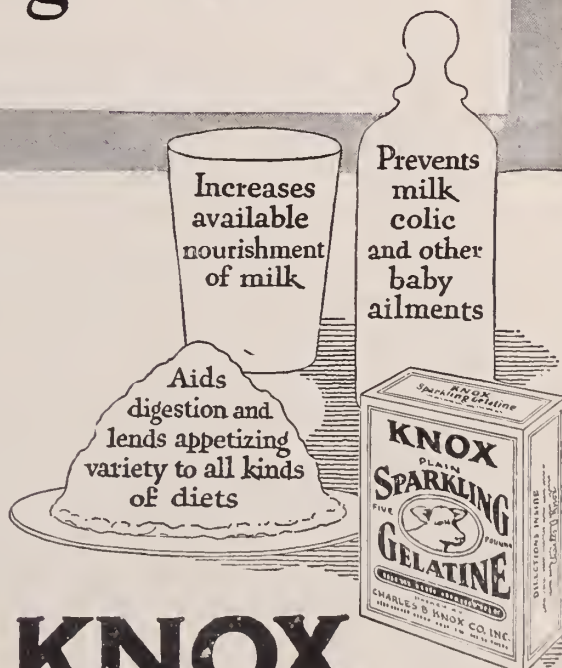
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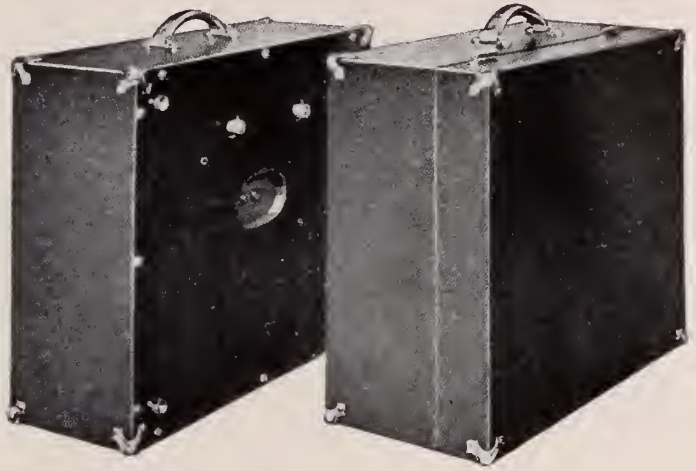
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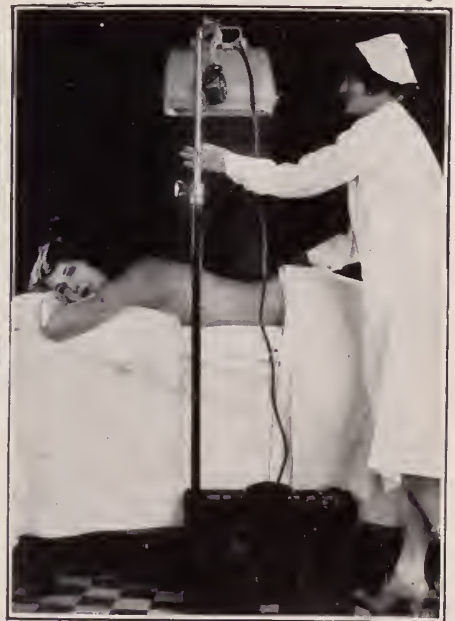
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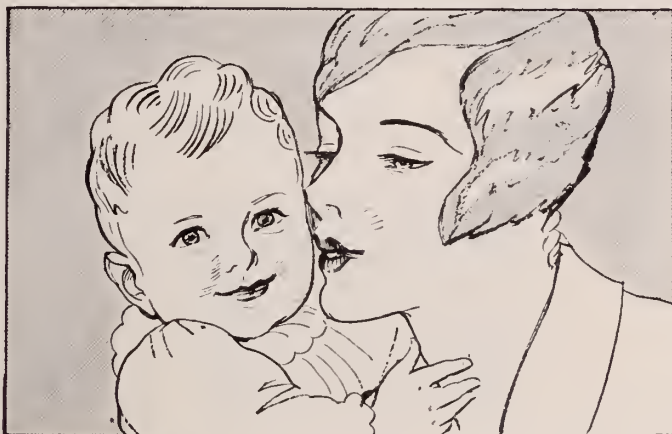
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"THE TONSIL AS A PRIMARY FOCUS OF INFECTION"*

F. PETER HERMAN, M.D.,
West Palm Beach.

It is my purpose in bringing this subject before this meeting to attempt to gain a further recognition on the part of the general practitioner and surgeon of the important part played in all branches of medical practice by focal infection, originating in the faucial tonsil.

As to function, there is presented a greatly debated medical question, some authorities believing that the tonsil plays an important part and should be conserved, while others believe the contrary and advocate the removal of all tonsils.

A few of the more important theories as to the function of the tonsils are:

1. That they are glands of internal secretion.
2. That they are regional lymphatic glands of the nose.
3. That they are excretory in function, with the lymph stream toward the pharynx.

The latter, however, has been disproved by Schlemmer, who has shown that there are no afferent vessels to the tonsil, and that the lymph stream does not flow toward the pharynx, but to the crypt of the jugular glands of the neck.

Another belief is that the tonsil functions identically as does the thymus gland and has to do with the development of the body in early life, this theory being strongly supported by the fact that under normal conditions (meaning by under normal conditions lack of disease), the tonsil undergoes a physiologic atrophy in adult life.

The tonsil may be considered a lymph-epithelial organ. Carl Peters, the anatomist, considers the appendix to be of the same structure as the tonsil. He does not believe it to be a rudimentary organ, but one of lymph-epithelial character, and terms it the intestinal tonsil.

With this in mind, I wish to discuss briefly two of many such cases which have come under my observation.

Case of R. S. S.: A boy, small for his nine years of age, presented an undernourished, pale

and rather undeveloped physical condition. Upon casual examination, there was no evidence of infected tonsils, in fact, one could barely see them. Upon elevation of the anterior pillar, with the retractor, there presented a tonsil of the small cryptic type, with many of the crypts exudating pus. There was given a negative history as to previous tonsillitis. Upon removal, the child made an uneventful recovery and was dismissed at the end of the week, with the usual admonishment as to care, food, and rest. At the end of the second week he was operated upon for an acute appendix.

Case of Mr. H. P.: Age 27, was advised to have tonsils removed when substance extracted from them showed pus organisms. He gave a history of frequent acute infections. Owing to the nature of his work, he thought it impossible to have operation performed at the time. The tonsils were treated for several days, bringing about an evident retrocession of the active state. Ten days after the first day's manipulation he was operated upon for an acute appendix.

Hellman's theory, one which, perhaps, enjoys a most universal acceptance, being that under normal conditions, the tonsil as well as Waldeyer's ring receives an irritant of some sort, either from within or without, the result of which is that a change takes place in the follicles with the formation of secondary follicles and the production of lymphocytes.

When the irritant is of slight degree the process may be regarded as physiological, but otherwise, when the irritation is caused by virulent bacteria, with the more severe irritant, pathology is ushered into the scene. It is accompanied by hyperplasia of the follicles, with the resultant fibrinous deposit, and necrosis of tissue, a transition, as it were, from a physiologic to a pathologic condition, depending on the severity of the irritant.

In support of the latter theory we all know that tonsillitis rarely begins as a local manifestation, but is usually ushered in with a general feeling of debility, oftentimes by a disturbance of the gastro-intestinal tract, which latter condition perhaps lends support to those cases of appendicitis following tonsillitis, or tonsillectomy. How-

*Read before the 54th Annual Meeting of the Florida Medical Assn., W. Palm Beach, April, 1927.

ever, this must be explained as part of a hematogenous infection.

Dietrich has shown that there are two types or varieties of acute inflammations of the tonsils, namely, the catarrhal or superficial type, and the fibrinous-membranous or intertonsillar type, which has a tendency to spread inward and cause abscess formation with the subsequent sub-epithelial scar formation. This scar tissue acts as a chronic irritant, producing an exudate and proliferation, the precursors of frequent acute inflammations, or continuous irritations of a low grade infection, which in turn gives rise to the concretions, always found at the site of chronic inflammatory disturbances, as for example, the crypts of the tonsils and the veriform appendix. The presence of these concretions usually is manifested in circulatory disturbances within the surrounding tissues and give rise to retention with inflammatory reactions.

It has been my observation in many tonsillectomies following a positive history as to frequent attacks of tonsillitis, or less severe throat irritations, that there exists a considerable varicosity at the faucial base, showing that nature's efforts have been put to the utmost in bringing the hematogenous system into play. It is my opinion that these varicosities which have remained after the primary attacks have subsided, represent the very doorways through which the vandals of the more distant systemic involvements are able to enter the blood stream, and which, perhaps, offers one of the most convincing verifications of the hematogenous theory.

Further that these varicosities, as well as the aforementioned irritants, be they scar tissue, or various forms of concretions, remain constant, thus causing the tonsils to permanently lose all of their physiologic properties and to function only as pathologic entities, and as such constitute a menace to the health and life of the individual retaining them.

Among the local conditions traceable to tonsils may be mentioned, acute tonsillitis, peritonsillar abscess, inflamed cervical glands, repeated attacks of pharyngitis, laryngitis, and bronchitis, continuous colds in the head (which often means a chronic sinus infection), acute catarrhal or suppurative otitis media, chronic suppurative otitis media, any tendency toward a defect in hearing acuity should be looked upon with suspicion, various eye conditions, particularly acute iritis, repeated headaches, and mouth breathing.

It is impossible to enumerate all general conditions, but most of them are dependent upon a devitalized general condition. There is one group of general symptoms proven to be due to tonsillar infection; that is the various acute, sub-acute and chronic conditions which belong to the rheumatic syndrome.

Among these are acute and chronic rheumatism, endocarditis, chroea, and nephritis of the various types.

Two conditions have been brought to my attention quite recently; one, a septic temperature of unknown origin, the other, a general adenopathy not traceable to tuberculosis or lues.

The first case, Miss H., eighteen, weight 91 pounds. Rather pale and anemic in appearance. Would get up in the morning feeling quite rested, but after a short period would become very tired. Each afternoon was running a temperature of one hundred or more. A blood count showed the leukocytes to number twelve thousand, and the red cells, three million, two hundred thousand.

The assistance of an able internist availed nothing except a very doubtful left apical tuberculous spot. An X-ray of the teeth and sinuses were made, both with negative results. The tonsils presented an unpretentious picture in so far as any possible trouble having its origin at this point. They were of the submerged, physiologic involuted type.

Four intravenous injections of iron and arsenic were given over an interval of two weeks, which perhaps accounted for an increase of seven hundred thousand red cells found in a count taken at this time. The white showed a slight increase. A tonsil leukocyte test, as recommended by Metohoffer, was now undertaken. Three hours after this vigorous manipulation, the white cells were again counted and showed an increase of four thousand, with eighty-one per cent poly-morpho-nuclear, the former count showing seventy-six per cent.

Upon these findings, justification for removal of the tonsils was based.

An uneventful recovery ensued. One week later the iron and arsenic injections were continued. Six weeks later the patient weighed 103 pounds, slept well, had a good appetite, was running no fever, and was able to put in full time as a private secretary, with none other than natural reactions.

The second case, a six-year-old boy. Re-

ferred to me after an internist had ruled out all other possible causes for condition of general adenopathy.

The tonsils were of the small, submerged, child type, which condition is more common than usually thought, in that they had not gone through the stage of physiologic hypertrophy.

The tonsil leukocyte test showed an increase of three thousand, two hundred, not as pronounced as in first case, but sufficient in my mind, in the absence of any other possible etiological factor, to advise removal of the tonsils.

The superior pole of the left tonsil was found to be completely involuted, with atrophy of the parenchyma, thereby effectively preventing any drainage into the throat, while at its base there presented a well-developed varicosity.

Within three days the glands of the entire body showed a beginning reduction in size, and the pain which had been quite a factor, had about subsided. The administration of potassium iodide and bichloride of mercury, which had been given for some time previous to operation, was continued. Four weeks after removal of tonsils there had been a complete retrocession of all glandular enlargement. The child had gained six pounds in weight.

I think a few words on the subject of epidemic meningoencephalitis would convince most anyone of the result of focal infection: as a simple attack of tonsilitis will produce encephalitis. It is a well recognized fact that when there is an inflammatory process produced in the brain, there is an equivalent amount of scar tissue resultant.

The cerebellopontine angle is the commonest area of involvement in so far as production of scar tissue is concerned, so that a diagnosis of tumor is frequently made. Anyone or all the cranial nerve nuclei may be involved, as well as any or all tracts in the cord. The base of the brain is more frequently involved in inflammatory conditions with recognized symptoms than any other part of the nervous system.

A most interesting case, undoubtedly of the meningoencephalic type, was referred to me about eighteen months ago.

A young man, age twenty-one, was practically carried into my office. He presented the wasted appearance, the highly colored cheeks, and the general attitude of a highly active tuberculous condition. The mouth and throat was one continuous ulcer, the teeth loose in their sockets, the

breath most fetid. The blood Wassermann as well as the spinal fluid were negative. All physical signs of lues were negative, as well as any history solicited. The sinuses were negative, the X-ray of the lungs suggested no active lesions. The smear of the throat was positive for Vincent's angina.

The patient was put to bed. Topical applications of "Dental Arsphenamine" (Abbott) were applied, a suitable cleansing mouth wash and gargle were given. On the third day a sixteenth of neoarsphenamine was given intravenously, repeated at the end of the first and second week respectively. The patient showed some gain in strength, but very rapidly lost practically all sense of direction and voluntary movements, to such an extent that he was unable to feed himself.

By the sixth week the local throat and mouth condition had completely subsided, but there was no improvement in the condition as to motility. Weight originally one hundred and sixty pounds, had dropped to one hundred and nine pounds in six months, thus showing the gradual incipency of the condition.

Having given a long history of throat involvement, and being unable to catalogue the present condition, I felt justified in suggesting the removal of the tonsils, believing they were playing a sinister role. They were removed under local anesthesia, without moving the patient from his bed.

The internal medication of potassium iodide and bichloride of mercury was given, as well as daily exposure to the morning sun-light of the entire body. At the end of ten days considerable improvement was noted, the patient being able to get a glass of water to his mouth and drink.

Six weeks from date of operation he walked from his bed to a chair with the aid of two canes. From this time on the improvement was very rapid, and now at the date of this writing, the return to normal is complete. The patient weighs one hundred and sixty-one pounds, works as a mechanic, and rides a motorcycle. I might add that the highly colored cheeks, so indicative of tuberculous involvement, still remain in this case, which evidently is natural in this instance.

True the conditions touched upon in this paper, one and all, could be caused from other than a tonsillar source, such as the accessory sinuses, etc. However, it has been my observation in

many cases of sinus involvement, that they were in all probability secondary to diseased tonsils.

It is hoped by the writer, as stated at the beginning of this paper, that it will in a measure act as a medium to further the recognition of the joint responsibilities of the general practitioner and the otolaryngologist, the former, by acknowledging the evident connection of the tonsil in a great many conditions seen by him and him only, in which there exists only the active systemic condition.

Having accepted the possibility of tonsillar involvement, he should use the methods most applicable in forcing this insidious rascal from his lair, thereby showing what part it may be playing. Meaning that the most often overlooked type of tonsil is the physiologic, involuted submerged type, which will only show itself upon elevation of the anterior pillar, and more often only after firm pressure has been made at the point of the superior pole, causing the patient to gag, thereby throwing the tonsil forward and outward, thus bringing it into proper position to examine.

These direct methods having availed nothing diagnostic, the tonsil leukocyte test should finally be used, always remembering the danger, however, in cases giving a history of previous joint, nephritic, or cardiac conditions, or in such cases in which one might suspect the possibility of exciting some other latent systemic disease.

The part of the otolaryngologist should be to return the patient who has been referred, along with suggestions as to cooperation in working out a fitting finis.

DISCUSSION.

J. L. Boone, Jacksonville:

I first want to congratulate Dr. Herman on his paper. He has certainly worked it out from different angles. For a number of years about everything that could be said about tonsils has been said, but he has approached it from some new angles. The worst thing as far as making an accurate diagnosis is being able to decide which should come out and which shouldn't. The general rule, I think, is when in doubt, take them out. It has been said that the only good tonsils are those in a bottle.

He has brought out one thing, the test by Mitchofer, that of manipulation of the glands with subsequent increase in the leukocyte count. This should be a diagnostic aid.

There was reported in the Archives of Otolaryngology a short time ago a series of several hundred cases, with a culture taken from the indistinct tonsils, the healthy tonsils and three groups of particularly diseased tonsils. The outcome bacteriologically was practically the same in all of them. In that case, we are no better off than before, but if by manipulation we can come to better conclusions, we have accomplished something.

It might be interesting if the Doctor could get together a series of cases in the next twelve months to see if the normal cases check up differently from the pathologic in regard to the leukocytic count.

R. D. Ferguson, Titusville:

I would like to stress the importance of going over the head when the patient comes in. It only takes a few minutes to run over the nose and throat and check up on the septum, turbinates and tonsils. We very often get at the bottom of what is causing the patient's trouble in this way. If we can get that one point carried over, to thoroughly emphasize going over the head as a focus of infection in systemic conditions, then we have gained a whole lot from this paper.

S. A. Folsom, Orlando:

One point in Dr. Herman's paper that was interesting was the mention made of general glandular enlargement caused by a tonsillar infection. I believe George Merrill of Boston is responsible for this theory. In his explanation, he offered nothing definite, but we do know in children under twelve years of age, you will sometimes find it, and even though you try to rule out other causes than the throat, the throat stands by itself as one of the causes. I can recall cases sent in from surrounding towns with a diagnosis of tuberculosis, which diagnosis was later disproved. The point we should bear in mind is that we should not only consider tuberculosis and lues, but the throat should also be kept in mind.

F. Peter Herman (closing):

I wish to thank Dr. Boone and Dr. Ferguson for their kindly discussion, with this reply to Dr. Boone: I have in preparation a series of cases in which the tonsil-leukocyte test has been most interesting, and intend to continue this series for future presentation.

WHY THE GENERAL PRACTITIONER SHOULD BE FAMILIAR WITH THE ANATOMY AND PATHOLOGY OF THE MASTOID AND PETROUS PORTIONS OF THE TEMPORAL BONE.*

JAMES B. PARRAMORE, M.D.,
Jacksonville.

The general practitioner of medicine is, in most cases, the first physician consulted when the patient has pain, tinnitus, deafness or dizziness. An early correct interpretation of these symptoms may be the means of not only preventing chronic deafness but the saving of a life. Patients consult their physician because they are confident he is familiar with the anatomy of the part concerned.

A knowledge of the anatomy of the mastoid and petrous portions of the temporal bone will help the physician understand pathological lesions affecting the inner and middle ear. He will be on guard to prevent the infection from spreading to adjacent structures, for example, an acute infection of the middle ear may rapidly spread to the mastoid cells, labyrinth, dura, cerebrum, cerebellum, or to the lateral sinus. A knowledge of the anatomy of the internal ear which contains the organ of hearing and the semicircular canals which govern our equilibration may help him understand patients with symptoms of vertigo. These patients should have a functional examination of their internal ears made by a competent aurist in order to tell if the internal ear is diseased or whether it is due to toxins or cardio-vascular changes affecting the endolymph, the fluid that circulates in the semicircular canals.

In 1915, Robert Barany of the Vienna School of Otologists was awarded the Noble prize for his work on the functional examination and tests of the labyrinth. Since that time physicians have learned to refer their cases of vertigo or suspected tumor of the brain to an aurist in order that he may determine by functional examination of the cochlea and semicircular canals if a tumor is present or to account for the dizziness. There are definite reactions to normal ears when the caloric, fistula or turning tests are used and entirely different results when the inner ear or the nerves communicating between the

inner ear and brain are interfered with or diseased.

The temporal bone is one of the most important in the body. It contains the membranous and bony labyrinth. These structures surround the cochlea, which is supplied by the auditory nerve and contains the organ of hearing and the static labyrinth composed of the vestibule and semicircular canals, which govern our equilibration. The cochlea and semicircular canals are connected by the vestibule so that infection of one readily spreads to the others. If an infection once attacks the labyrinth we have either a diffuse or circumscribed labyrinthitis. If the infection remained in the labyrinth there would be no danger, only the distressing symptoms of vertigo and deafness, depending on what part or parts of the labyrinth were affected. When once infected the tendency is to rapidly spread to the meninges, causing meningitis, followed in most cases by death.

The tympanic membrane or drum that separates the middle ear from the external canal wall is only about one-fourth of an inch from the labyrinth. In doing a myringotomy, if the knife is inserted too deeply it may injure the labyrinth. If the incision is made in the wrong place or in the wrong direction, the small bones or ossicles may be permanently damaged. There have been numerous cases where the canal walls have been incised instead of the tympanic membrane as all the land-marks may be gone when the tympanic membrane is red and bulging. The labyrinth may be injured during an acute exacerbation of a chronic lesion if attempts are made to do a myringotomy where there is no remaining drum or where there is a large perforation.

Before proceeding, it may be wise to review the anatomy of the petrous and mastoid portions of the temporal bone, for some may not be familiar with the anatomy of the temporal bone and a review will be necessary in order to understand pathological lesions affecting this bone.

The temporal bone is composed of three portions—the mastoid, petrous and squamous. The mastoid process is a conical projection of the mastoid portion. On the inner surface of the mastoid portion is a deep groove for the lodgment of the sigmoid portion of the lateral sinus which empties into the internal jugular vein. Owing to the close proximity to the mastoid cells it is particularly liable to infection when the mastoid cells are attacked by a virulent microorganism.

*Read before the Fifty-fourth Annual Meeting, Florida Medical Association, West Palm Beach, April, 1927.

ism such as the streptococcus. This is the organism most frequently recovered from the blood stream in acute mastoiditis complicated by infected lateral sinus thrombosis. When this complication arises, an immediate operation is necessary. The internal jugular vein requires ligation above the facial vein, then the sinus should be opened and the clot removed. The above operation is necessary in order to prevent further spread of the infection.

The mastoid antrum is in the upper and anterior part of the mastoid portion. It communicates with the middle ear through a small opening, the aditus ad antrum. The mastoid antrum becomes infected by extension of inflammation from the middle ear. Infection may then spread to the other mastoid cells, the rapidity depending on the virulence of the infecting organism, and the patient's resistance to disease. When there is extensive destruction of the mastoid cells, the bony plate covering the dura is liable to be destroyed; in this case a subdural abscess, meningitis or abscess of the cerebrum may complicate the mastoid infection. Fortunately for us the dura in the middle fossa is very resistant to disease, so there are few cases of meningitis, unless the labyrinth is infected and the infection spreads to the meninges. If the sinus plate is destroyed, a cerebellar abscess may form from extension to the cerebellum or if the infection attacks the walls of the sinus, a lateral sinus thrombosis may develop.

The petrous portion of the temporal bone not only contains the structures of the inner ear but the structures of the tympanum or middle ear. The tympanum is the first portion, in most cases, attacked by pyogenic organisms. The infection gains entrance by means of the eustachian tube which is lined with mucous membrane and connects the middle ear with the nasopharynx. After the infection gains entrance to the tympanum, the mucous membrane becomes inflamed with the resulting pus formation. If this pus is not allowed to escape through the external canal it will spread to the mastoid cells through the natural opening. If the tympanic membrane is not incised as soon as the pus begins to form it will force its way into the mastoid antrum and from there spread to the mastoid cells. Nature comes to the rescue in a good many cases by rupturing the drum but often not until the mastoid cells have become infected. Early myring-

otomy as soon as the drum is red is the best thing for the patient. If the drum is opened under aseptic precautions the chances of infecting the middle ear are slight, so it is better to take this chance when in doubt, than wait until the mastoid cells have become diseased.

If the infection is a particularly virulent one, such as the streptococcus or the pneumococcus mucosa capsulatus type three, there may be a rapid destruction of tissue.

If the pneumococcus mucosa is the infecting organism, there may be a rapid destruction without the patient having any pain over the mastoid area. No case where this organism is found should be discharged as cured, after the discharge into the external canal has ceased, until an X-ray examination shows that the mastoid cells are not diseased.

In every case of middle ear disease smears should be made to determine the kind of organism present. If the infection is mixed or the staphylococcus is found there is no reason to rush the patient to a hospital for a mastoid operation. Even if the X-ray examination does show the mastoid cells to be cloudy, the patient may recover without an operation. A large number of cases of this type that came under my observation while House Surgeon at the New York Eye and Ear Infirmary recovered without operation.

What has been said regarding the danger of complications in acute infections of the middle ear is equally true of chronic infections. Every large aural clinic admits patients to the hospital with brain abscess, labyrinthitis, meningitis and infective lateral sinus thrombosis resulting from extension of chronic middle ear disease. A history of chronic or intermittent aural discharge should be regarded as dangerous to the patient until we are confident there is no disease of the bone. In other words, that it is only an infection of the mucous membrane.

The X-Ray examination is a very valuable aid in the diagnosis. It not only shows the condition of the mastoid cells but the position of the lateral sinus. When the position of the sinus is known it lessens the possibility of opening the sinus during a mastoid operation. Dr. W. McL. Shaw of Jacksonville has kindly consented to show some mastoid slides and discuss this paper from the standpoint of the Roentgenologist.

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DISCUSSION.

B. Palmer, Miami:

It is unfortunate that there is not a larger number present to have heard Dr. Parramore's presentation of this excellent paper. His paper deals with a highly technical subject and he is to be complimented on the able manner in which he presented it. I have no disagreement to make with the subject matter of his paper, I would, however, take exception to the title as being ill-chosen. It is my belief that it is not fair to expect the already overburdened general practitioner to familiarize himself with the detailed anatomy and physiology of the temporal bone. In fact I do not believe this to be desirable.

I do, however, believe that the otoscope should be a part of the armamentarium of every practitioner. It might be possible for the busy practitioner to recognize all of the different diseased conditions which a tympanum might present, but it is reasonable to expect that he can soon learn to differentiate the normal from the acute inflammation.

The use of the otoscope certainly aids in the diagnosis of many obscure conditions, especially in infancy and childhood, and if for no other reason, I would urge that every practitioner make use of the otoscope in all routine examinations. Again I would express my appreciation of Dr. Parramore's splendid paper and close by saying that it is of more particular interest to those who are especially interested in otology.

IV. McL. Shaw, Jacksonville:

Dr. Parramore has asked me to illustrate the X-ray findings of mastoid diagnosis as well as we can on a screen of this nature and I brought a few slides.

The first is diagrammatic, trying to reproduce a few things we try to see in the films. Roughly the mastoid area comes here. This is the antrum—the tip is here, etc., etc.

This slide represents the earliest change which we can detect in a properly made X-ray film. The normal mastoid on this subject falls on this side. See the canal, the mastoid area, cells well

aerated and the larger cells at the periphery, showing smaller cells nearer the canal. Dr. Shea of Memphis brought out that fact a few years ago, that the mastoid area forms from the center and that as the cells are formed, they are proportionately larger so that the larger cells are found on the periphery of the normal mastoid. This mastoid is slightly cloudy and you get a slight loss of cell structure. These fine trabeculae are hazy, gradually absorbed, and eventually lose their appearance entirely and there is haziness over the whole region.

One of the most important things we can tell the surgeon is the distance from the anterior sinus wall to the canal. This is very important in operative work.

This is another illustration of a normal mastoid, with good aeration of the cells, a combination of large and small, and its companion which is beginning to show loss of cell structure with clouding.

This is the same condition, except it has progressed to an actual abscess. We see the canal runs here and if you look carefully, you can see a loss of density right here representing an acute mastoid abscess in a young child.

This is the same thing, practically, except this film is made in a true lateral position.

Considering chronic mastoid conditions, you see immediate loss of structure here. This has been operated previously. The mastoid structure had been removed and there was a residual infection in the region of the tip.

This shows a somewhat similar condition, except more advanced, with complete clouding of the structure and a perisinus abscess. The anterior wall of the sinus is rough, and shows indentations and erosions. These cases have all been checked by operation.

This slide was put in only to demonstrate traumatic pathology of the mastoid, with fracture of the temporal bone running down into the canal. You can trace the fracture lines. This patient was injured in an automobile accident a few miles from Jacksonville and brought to the city bleeding profusely through the external auditory canal. He made a recovery and is back at work after a very stormy convalescence. There were extensive fractures extending down through the temporal bone into the canal. This shows an overlapping fracture of the skull—this linear fracture is another overlapping. I brought this slide to demonstrate a fracture into the mas-

toid, a very serious condition. A case of traumatic mastoid rarely lives.

James B. Parramore, Jacksonville (closing):

I wish to thank Dr. Bascomb Palmer for his able discussion and Dr. Shaw for his lantern slide demonstration.

Dr. Palmer made the statement that he did not think it essential for the general practitioner to be familiar with the anatomy of the temporal bone. I beg to differ. If he is familiar with the anatomy he will recognize early pathology and refer the case to an aurist before it is too late to prevent chronic deafness or complications that may cause a long illness or a fatality.

THE TREATMENT OF ECLAMPSIA*

C. J. COLLINS, M.D.,
Orlando.

Eclampsia has been called the disease of theories. Occurring approximately once in 500 pregnancies, with a maternal mortality of 10% to 45% and a fetal mortality of 30% to 60%, it continues to remain one of the unsolved problems of medicine, and the most fearful complication of pregnancy. While much good scientific work has been done on the cause of eclampsia, most of it has been only eliminative in results, and at the most we can only feel that the condition is caused by toxins of unknown nature, circulating in the blood stream, producing periportal necrosis in the liver, degenerative changes in the kidney and causing convulsions by their direct action on the anterior cerebral cortex. The treatment of such a condition must therefore necessarily be empiric and without scientific foundation.

Eclampsia is preventable in the great majority of cases, although not always, even with the best prenatal care we can give our patients. Every physician who accepts an obstetrical case should regard that patient as a potential eclamptic, and only by giving her the proper prenatal care will he be doing his conscientious duty toward her. If we find in a patient a personal or family history of nervous instability, kidney disease or a so-called "bilious" nature, we must be all the more on the lookout for pre-eclamptic signs. Urine examinations of our patients every four weeks during the first six months of pregnancy, after that, every two weeks and during the last

month, every week, with blood pressure readings at these times and careful interrogation as to subjective symptoms, will apprehend the large majority of cases of pre-eclampsia. A systolic pressure over 130 mm. should excite suspicion and one over 150 mm. should demand attention. A sudden excessive gain in weight is suspicious of a beginning toxemia—hence it is a splendid idea to keep a weight record of the patient at each visit. The excretion of more than one gram of albumin per 1000 c.c. of urine or a total of more than 3 grams in 24 hours is indicative of a serious condition. Blood chemistry has proven of very little value in forecasting eclampsia and its main value is a determination of the carbon dioxide combining power of the blood plasma and the blood sugar in treating the condition. Headache, usually occipital, irritability, blurring of vision, edema and epigastric pain, a very important symptom, should immediately arouse our suspicions of impending eclampsia.

The pre-eclamptic should be put to bed on a protein poor, low salt diet with large quantities of water and daily saline purges. An exclusive milk diet may be used but probably has no advantage over the above. Harding and Van Wyck from a study of diet for pre-eclampsics believe that protein or fat even in excess produce no ill effects, and that the exclusion of salt is all that is necessary. Not one of their cases studied developed convulsions after salt restriction, and they suggest the inclusion of one salt-free week in four as a prophylactic measure against eclampsia, in addition to the usual prenatal care. In addition to diet and rest, magnesium sulphate intravenously offers a very valuable means of treating the severe cases by giving daily injections of 20 c.c. of a 10% solution. After an intravenous dose of magnesium sulphate, the patient will often immediately comment on the disappearance of the sense of constriction and impending disaster. In urgent cases a venesection of 500 to 1000 c.c. of blood may be done, and if after this blood pressure continues to remain dangerously high and the albumin in the urine does not diminish, we should not temporize any longer, but proceed to empty the uterus. No definite time of waiting can be arbitrarily laid down, but each case must be carefully watched individually. In a multipara all that is usually necessary is to rupture the membranes. In a primipara it is usually best to pack the cervix and vagina with gauze for 12 hours, then rupture the

*Read before the Orange County Medical Society, June 15, 1927, and the Lake County Medical Society, September 1, 1927.

membrane and insert a hydrostatic bag which will be expelled when pains become vigorous enough.

In the treatment of eclampsia, there are two classes, the conservative and the radical. The radical group believe that the essential feature is to empty the uterus by operative means as soon as possible after the first convulsion. The conservative group believe that the eclamptic should first be treated medically and operative treatment withheld for more favorable conditions or after symptomatic treatment fails. I earnestly desire to make a plea for the conservative treatment of eclampsia. After Stroganoff reported a mortality of 6.6% in 360 cases in 1909 treated conservatively by profound narcosis with morphine and chloral, the conservative treatment has gained more and more advocates. We know that the eclamptic is a poor surgical risk, about 4% dying as an immediate result of forced delivery, bears anesthesia poorly and acquires acidosis easily, is liable to shock and is much more susceptible to infection than her better equipped sister.

Williams at Johns Hopkins reports a mortality rate of 22% from 1911-1916 with the radical and 14.8% from 1912-1922 with the conservative treatment. Polak believes that the treatment of eclampsia is essentially medical and that labor should be disregarded until the cervix is fully dilated, when if the head is engaged and at the spines, labor may be expedited by low forceps. Cesarean section has been limited to those cases where there is a definite obstetric indication. Davis and Harrar at the New York Lying-In give a mortality rate of 36% in 150 cases in 1905 when accouchement force was at its height of popularity and in 1918 with large doses of morphine and a patient and conservative handling of delivery in 147 cases a mortality of 15%. Their results in delivery by Cesarean section have not been encouraging.

A patient in eclampsia is an emergency case and should be in a hospital with a competent nurse. The room should be darkened and the foot of the bed elevated so that the mucus may run out of the mouth. A tonsil suction pump if available is convenient in removing mucus from the throat. A clothes pin or piece of rubber tubing between the teeth will protect the tongue. The first indication in the treatment is to control convulsions and this is best done by the intravenous injection of magnesium sulphate solution

as first reported by Lazard early in 1925 in 17 cases with one death. According to McNeile and Vruwink, working at the Los Angeles General Hospital, the use of magnesium sulphate is followed by some reduction in blood pressure, reduction of edema (probably including cerebral edema) and increased output of urine. They conclude that this drug intravenously will control the convulsions of eclampsia in practically all cases and produce a favorable influence on the other symptoms of this disease. While they have had no symptoms of respiratory failure with its use, this must be borne in mind and is controlled by the immediate intravenous injection of 5 c.c. of 10% calcium chloride. With the treatment of eclampsia practically confined to the use of magnesium sulphate, the mortality rate at the Los Angeles General Hospital has been reduced from 36% to 14.8%. The plan followed at this hospital is to give 20 c.c. of a 10% solution every hour until convulsions are controlled. After this the blood pressure is taken every hour, and if it begins to rise, nearing its height at the time of convulsions, it is repeated.

H. P. Wilson reports a series of 17 cases of eclampsia in which all cases showed a definite lowering of the carbon dioxide combining power of the blood plasma, and convulsions were controlled with a return of the carbon dioxide combining power to normal or within normal limits, 55-70. This was accomplished by average doses of 500 c.c. of 10% glucose and 350 c.c. of 3% sodium bicarbonate solutions intravenously. He believes with the preliminary injection of glucose and soda, Cesarean section can be made a fairly safe operation in eclampsia when otherwise it would be ill-advised.

At Johns Hopkins in addition to a modified Stroganoff treatment, when the blood shows an undue rise in blood sugar and a decrease in the carbon dioxide combining power, glucose and insulin are given. 2 gms. of glucose to one unit of insulin. The dosage of insulin is gauged by the degree of hyperglycemia and the weight of the patient.

Hot packs are worthless and do more harm than good. They remove only water through the skin and reduce a protective edema. Eclampsics with edema are known to have a better prognosis than those without.

Colonic irrigations and purgatives before delivery are of little use, and tend to soil and con-

taminate the operative field and increase the dangers of infection.

The second indication in the treatment of eclampsia is to accomplish the delivery in as normal manner as is consistent with the safety of the patient. Labor pains usually begin shortly after the onset of convulsions in antepartum eclampsia and as a rule are strong and effective. With convulsions in control we should wait until the cervix is completely dilated when if the head is well engaged forceps may be applied if it seems to the best interest of the patient to hasten delivery, or if the head is at the brim of the pelvis and not engaged, a version may be performed. If, however, convulsions and coma should continue and the cervix is dilated 5 cm. the dilatation may be completed manually and a version done. This should be our nearest approach to accouchement force in eclampsia. Cesarean section should only be used when some disproportion or some definite obstetric indication exists and its use otherwise will only serve to increase the maternal mortality. I believe its only other indication is rarely in a primipara with a long rigid cervix, where haste is imperative, and here it is more desirable than accouchement force.

Veratrum viride was once highly praised by American writers and it has been especially popular in the South, but long experience has not justified its use in face of more modern and better methods of treatment. Thyroid extract has fallen into disuse. Occasionally in desperate cases, spinal puncture has proven of service.

After delivery a saline may be given and water and fruit juices freely by mouth for the first 48 hours. Then gruels, cereals, vegetables and fruits are added to the diet for 10 days and after that some protein is given. The patient should be closely watched as convulsions may occur even after a week. The baby should not be put to breast until after the patient has been conscious for several days and the urine is almost normal.

CONCLUSIONS.

1. The conservative treatment of eclampsia will yield a lower mortality rate than the radical. Especially is this true in the case of the average practitioner of medicine whose mortality rate in the radical treatment will increase in proportion to his lack of skill in performing operative obstetrics.

2. The intravenous use of magnesium sulphate solution will control the convulsions of eclampsia and is a very valuable adjunct to the treatment of this condition.

3. Cesarean section should be used only when there is a definite obstetric indication and the patient will be better prepared for the operation by the preliminary use of glucose and soda solutions intravenously. Accouchement force has no place in the treatment of eclampsia.

4. Hot packs produce more harm than good and purgatives and colonic irrigations before delivery tend to contaminate the operative field and increase the incidence of infection.

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FACIAL PARALYSIS WITH MARKED VERTIGO*

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 Lake City.

The expression facial paralysis is a rather general term, as this disturbance may stand alone as a diagnosis or may be associated with a variety of other conditions. Also, in any of its forms facial paralysis may be due to a large number of etiological factors, the sum total of symptoms being determined by the nature and location of the lesion along the course of the facial nerve.

Facial paralysis, the most common of all cranial nerve palsies, may be a part of a general hemiplegia, or combined with disturbances of the eye, ear, taste, or equilibrium, or all combined, or may be a simple facial paralysis and nothing more.

The seventh or facial nerve has its superficial origin in the upper end of the medulla oblongata and its deep origin is from the floor of the fourth ventricle in a nucleus, very near the origin of the sixth nerve.

The seventh nerve passes through the substance of the pons, then along the cerebellum and enters the internal meatus along with the

*Read before the Suwannee River Medical Society Lake City.

auditory nerve, the pars intermedia or intermediate nerve lying between the two. Then the seventh leaves the cranial cavity through the aquæductus Falopii. Along its course through the aquæductus Falopii this nerve at one point forms the geniculate ganglion, which ganglion receives the intermediate nerve and a branch from the vestibular division of the auditory nerve, the latter arrangement giving a connection between the facial, vestibular and auditory nerves. After its emergence from the cranial cavity, the seventh nerve breaks up into numerous branches which supply the facial and certain other muscles.

A lesion along the course of this nerve may be situated in the brain substance itself, or outside the brain substance but inside the cranial cavity, or along its course through the bony substance or extracranially. Then, as mentioned before, the symptomatology would be determined by such location. It is estimated that 80% of all seventh nerve palsies have the lesion extracranially, but it is the other 20% that gives us trouble and laughs at our mistakes.

The causes of this disease are many as so much of the nerve is exposed to disease processes of other tissues as well as to direct injuries and effects of weather conditions. Some of the etiological factors are direct injury due to blows or wounds to nerve direct: Pressure as from tumors, swollen parts and exostoses, neighboring infections as mastoid disease, middle ear disease, abscessed teeth and infected tonsils, acute and chronic infectious diseases as diphtheria, scarlet fever, typhoid fever, influenza, tuberculosis, etc., etc., as well as general conditions such as gout, diabetes mellitus and surgical operations. So you see, no doctor is immune from this form of trouble, nor is one exempt from responsibility. Finally, let us mention the familiar, frequent, but no doubt overrated cause, exposure to the elements, as sleeping or sitting in a draft, plodding in the rain, driving in the cold, and sleeping on the ground or a hard pillow.

This latter cause—exposure, gives the greatest danger for the wrong handling of this disease, for hardly a case can come to you which does not give a history of some recent exposure or other, and the patient is usually anxious for this to be the explanation. Hence, the doctor must be forever on his guard lest he outline a treatment or give a prognosis which later will have

to be changed and a new search for the real cause be instituted.

The case to be immediately reported is intensely interesting because of the number of factors involved and the excellent results of treatment.

CASE REPORT.

Mr. M., aged 26, auto mechanic, married and family history is negative.

Patient had the usual diseases of childhood, gonorrhea in 1918 and 1920, chancre at 21 and the same year, 1921, was discharged from the navy on account of tuberculosis, pulmonary. Tuberculosis soon became arrested and patient was able to go ahead with his work.

Present illness: On morning of June 1, 1926, patient left home apparently well, in a slow rain, to go to his work at a garage. On his way he suddenly became dizzy and began staggering as a drunken man would. However, by steadying himself by holding to objects along his route, the patient made his way to the garage and attempted to go to work, but fell down and felt "too drunk to get up." He then found that the left side of his face was paralyzed.

When examined at the hospital five days later the following findings were noted: A fairly well-developed and nourished white male weighing 126 pounds, normal weight 135 pounds, chest showed tuberculosis, pulmonary, arrested, circulatory system showed aortitis and blood shows 100% Wassermann fixation. Other physical findings were negative.

Neurological examination: Station-Romberg's sign positive and marked, gait is unsteady, and he staggers from side to side. Coordination tests are correctly done when patient is seated except in F. N. test fingers are placed too low when eyes are closed. Reflexes practically normal, left side of face is numb and completely paralyzed; patient cannot wrinkle brow nor close left eye and there are partial deafness and tinnitus in left ear. Has been having severe pains in left side of head, nausea and vomiting. Has one severe abscess in left upper tooth—No. 12.

Diagnosis:

1. Syphilis, tertiary.
2. Facial paralysis left with marked vertigo and slight deafness and tinnitus.
3. Pulmonary tuberculosis arrested.
4. Abscess periapical.

Patient was placed on mixed treatment daily and neosalvarsan once each week, and his abscessed tooth was extracted. About 10 or 12 days later patient began to improve. Improvement came by spurts and six weeks from admission patient was discharged with only slight symptoms present. He returned from time to time for his treatments and when treatment was discontinued Sept. 22, patient weighed 160 pounds and was apparently well. Remember that 135 pounds had been his normal weight and from June 6, 1926, to Sept. 22, 1926, he had gained from 126 pounds to 160.

Here we have a patient with facial paralysis and as associated with this are vestibular and auditory disturbances and all occur at the same time, we can place the lesion as far back as the geniculate ganglion.

As a source for cause we have fertile field. Patient had been exposed to bad weather, had a history of an old tuberculosis, had syphilis five years before and Wassermann of blood is still 100% fixation and patient has a severe abscess in left upper jaw. Any one of the four causes might have explained the presence of this condition, but which one *did* cause it?

Since the facial paralysis and its attendant disturbances so readily cleared up when abscessed tooth was extracted and antiluetic treatment administered, it is quite certain that either syphilis or bad tooth was the responsible source of trouble.

The moral is that in every case of facial paralysis the physician should carefully take into account every associated symptom and make a close search for etiological possibilities.

PATHOLOGICAL CURRENTS AND ASTHMA*

HIRAM BYRD, M.D.,
Tampa.

Since the development of the theory of pathological currents into a working hypothesis, it is found that what we know as disease, but which is more frequently only a symptom, as asthma, for example, is often resolvable into two or more elemental causes. Up to date this malady has been resolved, according to sources of exciting current, into the following groups:

a. Single source of current—right nasal bloc,

- b. Single source of current—left nasal bloc,
- c. Double source of current—right and left nasal blocs,
- d. Double source of current—right nasal bloc and right iliac fossa,
- e. Source of current extra-nasal, and as yet not resolved.

Of these groups, a, b, and c are entirely controllable through the nose; d can be improved, by subtracting the nasal element from it; but the element that is of extra-nasal origin is not reachable through the nose. While e cannot be even improved through nasal approach.

Asthma, in which the exciting current emanates from a nasal bloc, right or left, is usually a very simple proposition. In mid-attack, the nasal ganglion test is made, that is one ganglion is cocaineized at a time. If the first one does not relieve the asthma in say five minutes, then the other is cocaineized. If it is still not relieved, then the source of current is extra-nasal. But if it is relieved, definitely and completely, when the right ganglion is cocaineized, then the proof is complete that the source of current is the right nasal bloc. And so with the left.

Now cocaineizing the ganglion and arresting the attack serves a double purpose—it clarifies the diagnosis as to source of current, and at the same time it is a very valuable therapeutic procedure. For it frequently happens, why I do not know, that a few cocaineizations of the ganglion, in cases of this kind, are followed by a complete arrest of the disease. I have several cases on record that conform to this in every detail. Only one will be given for the others are all mere duplications.

Mrs. T., a Greek woman of twenty-seven, developed asthma, which lasted off and on for several years, gradually getting worse. At length when she reported for treatment, she was having an attack every night.

The right ganglion was cocaineized in mid-attack, and the attack completely arrested in say three minutes. Two days later she came back, in accordance with instructions, reporting that she had had only traces of it since the cocaineization. It was cocaineized again, and since that time she has had no trace of the disease. She was cocaineized twice more (four times in all) and dismissed. That was a little over a year ago, and she has not had any return.

As above indicated, I have on record several cases that are for all practical purposes dupli-

*Read before the Midland Medical Society, Bradenton, May, 1927.

cates of this, some relieved through the right nasal ganglion, and some through the left. But there is a class of cases that do not terminate quite so happily. While the asthmatic attack can be definitely and completely controlled by cocainizing a nasal ganglion, it returns, and can again be arrested, but it again returns, and again. Why the difference, I know not. The following cases illustrates this:

R. W., a lad of ten years, was having asthma of three years' duration. It was found that cocainizing the right nasal ganglion gave complete relief. This was repeated a few times, when the asthma seemed to get well. But after a few weeks it returned. Again it was intercepted at the right ganglion, and again abated. This is the history over and over now for several months. The parents have been advised that injecting his right nasal ganglion with alcohol, which is a more permanent method of "turning off the switch", should result in complete recovery. This will be done in due time.

There is still a third type in this group. While the asthma is found to be emanating from one or the other nasal bloc, the proof of which is its interceptibility at the ganglion, yet one gets only temporary relief, the symptoms reappearing regularly as if it had never been intercepted. The following case will illustrate this:

Mrs. T. M. F., who has been reported before (See Eye, Ear, Nose and Throat Monthly) but who has since yielded additional valuable information, is reported again. When she was five years of age she developed a cough, like whooping cough, which has dogged her all her life.

At the age of twenty—asthma was superimposed. At the age of 40 she reported for treatment, with this intractable cough, asthma of a severe and persistent type, and a special susceptibility to head colds. At that time I was just making some feeble advance in nasal ganglion work. It was found that cocainization of the right nasal ganglion relieved the asthma, but not the cough. This was tried again and again for several months. The right side of the nose was treated with silver nitrate, and gradually there was a little relaxation of the asthmatic symptoms but no real cessation.

Later it was discovered that cocainization of the left ganglion relieved the cough. Repeated cocainizations, and silver nitrate slacked the tension of the cough a little, but like the asthma it never recovered.

She thinks during this time the acute coryzas were a little less frequent.

At length she moved away, and treatment was left off, and soon all three symptoms were as bad as ever.

At this time she reported for treatment again, and her tonsils were removed, but the result was disappointing.

Along now I visited Dr. Sluder and got his technic for injecting the nasal ganglion with alcohol. So this was done in August, 1925. At the time, she was coughing very persistently, and having asthma every night and almost every day.

The two ganglia were injected ten days apart, the asthma side first. From the evening of its injection, she had no more asthma, but the cough, as was expected, continued.

Now between the two injections, she developed one of her acute coryzas. And curiously enough it was strictly limited to the injected side. This, to me, is one of the most illuminating observations yet made. But more of it, in another connection.

Ten days later, the cough side was injected, and with that the cough, like the asthma, ceased.

For the next twelve months she barely had a trace of either cough or asthma, and what is more, she did not have an acute coryza during this time. But at the end of a year the symptoms gradually began to reappear, and by the end of say fifteen months, seemed to be fully reestablished.

This is an important point as showing how long the effects of the alcoholic injection lasted.

It has now been twenty months (April, 1927,) since the injection, and a few irregular cocainizations during the last few months have shown that the switches were on so that currents again had free passage through the ganglia. So it was decided to inject the ganglia again.

April 9th, the right one (that is the asthma side) was injected late in the evening. It was expected to control her asthma as it did before. But to my amazement and hers, she woke in the night, with an attack of asthma. Not so severe as she had been having, but a distinct attack. It was accompanied by her cough which was not unexpected. Now the question was, whether the injection had been faultily performed, or whether there was another source of current.

If the injection was properly done, then that eliminated the right nasal bloc, and left the possible regions as the left, or the extra-nasal region.

Cocainization of the right ganglion would tell whether the injection had been defective, which it was not. That threw the responsibility upon either the left nasal bloc, or the extra-nasal region. Now the left ganglion was cocainized, whereupon the asthma ceased along with the cough. And since the relief was perfect, there being not a trace of it left, one can definitely say that the entire charge, at this time, was coming from the left nasal bloc.

One can also predict, with perfect assurance, that injection of the left nasal ganglion with alcohol, which is to be done a few days hence, will relieve both the cough, and the residue of asthma.

Here, then, we have a case of asthma, made up in layers, the one coming from the right nasal bloc, and reinforced from the left. When the first was intercepted, there was still a sufficient current coming from the left bloc to cause the asthmatic symptoms, but not enough to raise it to its wonted level.

This interesting case, itself a sort of working laboratory, throws even more light on asthma. Originally, the current causing asthma, came solely from the right nasal bloc, as shown by the fact that it was definitely and repeatedly arrested by cocainizing the right ganglion; and that injecting the right ganglion was followed by ten days' complete relief from asthma before the left one was injected. *The current then emanating from the left nasal bloc was exciting the cough, but not the asthma.* But recently the current emanating from the left nasal bloc, while still exciting the cough, was also reenforcing the current from the right side in exciting asthma, and when the latter was withdrawn by injecting the ganglion, was sufficient of itself to produce a distinct asthma though of a lower grade.

I have yet another case of asthma in which the current is resolvable into two elements—the one coming from the right nasal bloc, and the other from the right iliac fossa. The case is as follows:

Mr. L., age 43, has had asthma since three years of age, now forty years. At first it was intermittent, but with the advancing years it became more severe, and more regular, being during the last few years perennial. He was

subjected to the nasal ganglion test, the left side being cocainized first, but with no relief discernible. Then the right ganglion was cocainized, whereupon his symptoms markedly abated, but did not cease.

From this first cocainization he was better, being able to lie flat on his back and sleep, something that had been denied him for months without a break. The ganglia were now cocainized three times a week for a few weeks, and while he was on distinctly higher level he did not seem to improve any further.

The interpretation of the case was that we were dealing with an asthma whose exciting current was receiving reinforcement from two sources—one from the right nasal bloc, and the other from the extra nasal region.

He was now referred to Dr. Bryan, who with his usual care, determined that he has a sagging transverse colon, and a tender spot at the angular juncture between the transverse—and the ascending colon. It is possible that this is the source of the other current.

If this be the source, then it is evident that it requires surgical intervention—the anchoring up of the transverse colon. But he is not prepared for a major surgical operation at this time, and so a temporary expedient was resorted to. If this be in fact the cause of the extra-nasal current, then any mechanical support for the sagging colon should give at least partial relief. So a belt was adjusted, supporting the pelvic viscera. The improvement was marked from the very hour. He still has a residue of asthma, but nothing like it was before. He still has to get up nights to clear his throat of mucous, but not so often, and he is gaining weight, and feeling himself a well man for the first time in years.

This interesting case was clearly one in which there was a current coming from the right nasal bloc, and one coming from the right iliac fossa. The two combined both registering in the breathing mechanism, gave him a case of asthma that was of the knock-out type. When the nasal element was subtracted, he got on a higher level, being able to sleep on his back. When the pelvic viscera was supported he got still further relief, but still has a residue.

In the case of the exciting current originating in the extra-nasal region, as before stated, there is nothing for the rhinologist but to refer the case. There is nothing that he can do that will confer any lasting benefit. In actual practice

then, when asthma presents itself to the rhinologist, the first thing to do is to make the nasal ganglion test, in mid-attack.

If cocainizing one, or both nasal ganglia relieves the attack *completely* and if it does it *repeatedly*, then a few cocainizations will in some cases effect a permanent cure; in others, the ganglia will have to be injected with alcohol in order to get permanent relief.

If on the other hand, cocainizing the one ganglion in mid-attack gives partial, but not complete, relief, then appropriate measures will take off the layer coming from that side, and leave the patient on a higher level. The next task is to find the remaining layer, or layers and take them off. If the remaining one is in the opposite nasal bloc, then that can likewise be relieved through the nasal approach, but if not, then it is in the extra-nasal region, and must be sought for there.

VINCENT'S INFECTION OF THE SKIN, WITH SECONDARY INFECTION OF THE PREPUCE—CASE REPORT*

ELMO D. FRENCH, M.D.,
Miami.

The presence of Vincent's organism as a common saprophyte in the mouth and about the genitalia has lead to a hesitancy in considering this infection primary in any given pathology.

Much that has been written is devoted to classifying these organisms and a discussion as to the part they play in various gangrenous processes and fetid discharges in which they are found.

So far as we are able to determine Koch's postulates have never been fulfilled with Vincent's organisms.

However, whether a primary or secondary invader, the usual bacteriological and clinical response in this infection to specific therapy, especially the arsphenamines, makes a consideration of them of great importance in putrid and gangrenous infections of the mouth, throat, middle ear, deeper respiratory passages, genitalia, and skin.

Vincent's infection of the mouth and throat has become a familiar clinical entity.

The researches of Pilot and Pearlman, in which these organisms were demonstrated in the discharges of most cases of chronic otitis media,



Vincent's Lesion of Penis.

have established their clinical place in this condition.

The report of 37 cases by Pilot and Davis of pulmonary infection due to certain spirillo-fusiform anaerobes and characterized by abscess formation and gangrene, are important evidence of infection, usually by direct extension from the mouth or throat.

While some doubt has been cast as to whether the organisms of Vincent and those occurring as a fusio-spirillary symbiosis about the genitalia are the same, clinically it is not unusual to see a concomitant ulcero-membranous stomatitis and vulvitis.

According to Pusey the infection with these anaerobes occurs, in the male, in those with redundant prepuce and may take the form of an erosive balanitis, later becoming gangrenous or be gangrenous almost from the start.

It is to be differentiated from chancroid by the absence of Ducrey's bacillus and non-suppurative adenitis.

Upon the skin, lesions due to spirillo-fusiform organisms have been rarely reported.

Cases reported by Hultgen, by Peters and by Pilot and Meyer, occurred on the hands after traumatic contact with an infected mouth.

*Read before the Dade County Medical Society, August 5, 1927.

Corpus reported 598 cases of so-called "Tropical Ulcers", in Manila, occurring on the legs of school children as a contagious, gangrenous putrid infection in which spirochetes were found.

Recently Greenbaum reported two cases:

(1) Fuso-spirillary dermatitis with ulceration of external ear.

(2) Fuso-spirillary dermatitis of hands, complicating fuso-spirillary stomatitis and fuso-spirillary vulvitis.

We wish to present the following case which is in a way unique, in that clinically at least, the skin infection was primary and that of the prepuce probably by inoculation from the skin.

Patient J. T. P., male, age 18; student, baseball player, well-nourished and of athletic build.

Complaint: Sores upon legs of two months' duration which would not heal with use of various ointments and the much-exploited mercurochrome.

Past History: Essentially negative, except for rheumatism with cardiac involvement when a child, tonsillectomy four years ago.

Examination of Skin: Upon the lateral surface of the left leg, just below the head of the fibula was an ulcer, 4cm.x3cm. Also there was

a pitted bluish scar 2cm.x2cm. midway between knee and ankle on the anterior lateral surface of the left leg. On the right leg just anterior and above the external malleolus was another ulcer, 5cm.x3cm.

The appearance of the ulcers was the same and as follows: They were oval in contour and surrounded by a dark inflammatory zone. The edges were sharp and undermined, the base granular in appearance and exuding a foul-seropurulent discharge.

While there was no history of trauma, the ulcers were in a place easily traumatized by a baseball player. The skin was otherwise negative.

General Examination: The heart showed the apex beat to be in the fifth interspace to the left of the nipple line. A systolic murmur at the apex was heard in the left axilla and there was an accentuation of the second pulmonic sound. Blood pressure 124 systolic, 90 diastolic. Pulse regular and 90 per minute. No other physical abnormalities were observed.

Laboratory findings: Urine showed a moderate trace of albumen. Wassermann negative. Kahn test negative. A bacteriologist examination was not made at this time and the clinical diagnosis was "ecthyma." Wet dressings of aluminum acetate 2% and the rest in bed was prescribed.

The response appearing satisfactory, the boy was discharged in about ten days apparently recovering. He returned in three weeks. The ulcers had regained their old virulence and in addition there was present an acutely inflamed, edematous foreskin with a rapidly spreading marginal erosion and an abundant purulent discharge. There was also a moderate inguinal adenitis. At this time the following laboratory findings were reported by Dr. Litterer.

- (1) Blood Wassermann, negative; Kahn, negative.
- (2) Smears taken from gum margins and throat gave negative findings.
- (3) Specimen taken from both ulcers in the underlying structure show many fusiform bacilli, few streptococci and no spirillum. Dark field examination does not show any spirillum but rather thick bacilli and cluster of other bacteria, probably cocci.
- (4) Smears made on purulent discharge from edematous foreskin and stained with Giemsa, Grams and Carbol-fuschin show many spi-



Just above and anterior to right external malleolus, so-called "Tropical Ulcer."

rillum, some short, others long with 3 to 6 spirals, and well-defined fusiform bacilli, pus cells, and few streptococci. No diplococci of the morphology of genococcus could be demonstrated. Ducrey's bacillus negative. Dark field examination from same region shows about 15 spirillum per field which were very active. Few fusiform bacilli were found in each field.

- (5) Culture grown aerobically on plain agar shows streptococci and staphylococci.
- (6) Culture grown on blood agar plates (anaerobically) from ulcers on both legs did not show any growth due to the fact that these ulcers were in their chronic state and only few fusiform bacilli could be demonstrated from direct smears, however cultures from prepuce showed a growth composed of spirillum and fusiform bacilli about the 8th day.

SUMMARY OF LABORATORY FINDINGS.

- (1) Blood Wassermann, negative; Kahn, negative.
- (2) Negative smears from gums and throat to Vincent's infection.
- (3) Fusiform bacilli found in chronic ulcers from both legs.
- (4) Smears from prepuce shows many spirillum and fusiform bacilli which correspond with the typical description of the spiral organisms and fusiform bacilli found in Vincent's Angina.
- (5) Positive culture of Vincent's organism from prepuce.

Treatment: After the true diagnosis was ascertained a 2% aqueous solution of gentian violet was prescribed for the balanitis and right leg ulcer. Sodium perborate as advocated by Bloodgood and others for Vincent's Angina was prescribed for the left leg ulcer.

The response of the balanitis was rapid and almost complete healing took place in 36 hours with the Gentian violet solution. The response of the leg ulcers was slower and they were finally healed by cauterizing and applying Vincent's powder consisting of sod. hypochlorite one part and boric acid nine parts.

CONCLUSIONS.

- (1) A search for Vincent's organisms should be made in ulcero-membranous and gangrenous conditions of the skin and mucous membranes and in respiratory conditions marked by abscess formation and gangrene.

(2) Locally various oxydizing and spirillicidal agents are more effectual in the superficial infections and hence an early diagnosis is desirable.

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CASE REPORT—ACCIDENTAL DENUDATION OF THE GENITALIA

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Fort Myers.

The general routine of medicine and surgery being more or less commonplace, it is fitting to note some obscure or rare, and in this instance, unique, occurrence to remind us that such does happen.

When the Seaboard Railway recently came into this section, it was my opportunity to be called to see one of the injured on January 27, 1927. The patient was a man of thirty-five. The patient stated that he was caught accidentally in a steel drag-line which caused him to be completely revolved like a whirlwind. When he was freed it was found that he had been undressed and the appearance of blood caused him to be brought to the hospital where I saw him. Examination was essentially negative except that the whole scrotum and skin of the penis were missing, leaving the testicles with their structures and the shaft of the penis denuded. Bleeding had settled down to a mere oozing and upon closer inspection, it was found that the structures had received no damage more than that of exposure. Being unable to manufacture any skin of a scrotal nature, and remembering that early in embryo the testicles descend through the inguinal canal, I replaced each testicle in its inguinal canal and then sutured the lacerated skin edges in the groin together, thus hiding the testicles and their structures.

In covering the shaft of the penis, it was found that the mucous membrane part of the prepuce covering the corona had been left from the acci-

dent. This was pulled back and sutured to the skin at the base of the penis. The result of this work resembled very closely the classical operation for complete removal of the scrotal sac.

Although it was anticipated that this patient would suffer much soreness, he complained very little, had no infection, left the hospital in two weeks, came to the office in three weeks and was at hard work again in six weeks.

PRE-ORAL ENDOSCOPY WITH REPORT OF CASES*

S. B. FORBES, M.D.,
Tampa.

If there is one branch of medicine that is fraught with difficulties it is pre-oral endoscopy.

For the man who keeps in constant touch with this work it is more or less simple; however, to the one who has only a case occasionally it is a constant bugbear.

In this community, as in most others, outside of the larger medical centers the work is split up among the various eye, ear, nose and throat men.

The remuneration is perhaps the smallest of any branch. The records of the Jackson Clinic up to a few years ago showed that they collected from 9% of their patients. The instrumentarium required is very expensive, and is very difficult to keep in working shape.

The purpose of bringing this side of the subject up is this: to impress on you that we who do attempt this work do it from a humanitarian viewpoint. If we do not have the complete co-operation of the profession we are sure to fail.

Foreign bodies in the air and food passages are, in the average cases, not difficult to recognize.

The patient is usually an infant or child, and we can elicit a history of sudden attack of coughing, with wheezing or dysphagia. We may, if the patient is old enough, have the pain sense as an aid. If the foreign body is in the larynx, of course we have aphonia or extreme hoarseness. In the tracheo-bronchial tree a competent pediatrician or internist will find certain physical signs depending on the location of the foreign body. If it blocks one of the bronchi we find an obstructive emphysema on the side affected.

We may also get a compensatory emphysema on the opposite side. Later on we may develop all sorts of pathology of drowned lung, pneumonia, etc.

If the foreign body is in the esophagus, of course we have a dysphagia with regurgitation of food, and inability to take anything but liquids in very small amount. Later on in long-standing cases they may be able to swallow small amounts of solids if the foreign body does not obstruct the entire lumen of the esophagus. If the foreign body gets into the stomach there are usually no further symptoms unless it lodges at the ileo-cecal valve.

It is indeed surprising to see a large open safety pin pass through a small infant with no difficulty.

Roentgenology is our greatest aid in the average foreign body case. We determine the size, position, and location of the foreign bodies opaque to the rays, and in the non-opaque foreign bodies we can map out our lung pathology, which gives us the location as a rule. In esophageal cases a test meal may be given which will show an obstruction at the location of the non-opaque foreign body.

The earlier the presence of foreign body is diagnosed the better the prognosis. And that is where the general man can be of immense aid.

As to the tyros attempting this branch we are going to fail unless we work together more closely. At the Jackson Clinic we were taught to always work together in groups of threes; one to hold the head, one to handle the instruments, and one to operate. It has been my experience that whenever I have deviated from the rules handed down by Jackson I have failed.

Every year there are little ones sacrificed in this field entirely unnecessarily because of inadequate practice or experience. Teamwork and practice with the instruments on rubber tubes and dogs would prevent a great many of these deaths.

We cannot of course be expected to do as perfect work as men who confine themselves entirely to this branch, but we must systematize our work. If this is not done we had better just refer the difficult cases to Philadelphia, New Orleans or elsewhere.

I am briefly reporting here 19 cases of foreign bodies in my own practice.

*Read before the Hillsboro County Medical Society, July, 1927.

No.1

Lost

No.2

No.3

No.4

No.5

No.6

No.7

Lost

<i>Age.</i>	<i>Foreign Body</i>	<i>Location</i>	<i>Anes- thetic</i>	<i>Result</i>	<i>Time</i>	<i>Comments</i>
29 Years	Piece of roast meat. 12cm. long. 4cm. thick. 3½cm. in width. Weight 30 grams.	Pharynx. ½ hour.	None. Patient uncon- scious.	Extrac- tion. Cure.	2 min- utes	Patient moribund as foreign body forced epiglottis down over larynx.
19 Years	Pin.	Pharynx. 3 hours.	Cocaine 20%.	Extrac- tion. Cure.	2½ min- utes	Point imbedded in posterior surface of arytenoid. Head in pharyngeal wall.
41 Years	Fish bone.	Pharynx. Right. Pyriform sinus. 5 hours.	Cocaine 20%.	Extrac- tion. Cure.	3 min- utes	
32 Years	Fish bone.	Pharynx. Left. Pyriform sinus. 36 hours.	Cocaine 20%.	Extrac- tion. Cure.	3½ min- utes	
20 Years	Sandspur.	Larynx. 12 hours.	Cocaine 20%.	Extrac- tion. Cure.	4 min- utes	
14 Years	Sandspur.	Larynx. 3 hours.	None.	Extrac- tion. Cure.	3 min- utes	
8 Years	Sandspur.	Larynx. 3 hours.	Ether.	Sandspur probably expelled and swal- lowed. Cure.	10 min- utes	Colored boy. Very refractory. Probably expelled foreign body during etherization. Trachea and bronchi explored.

No.8



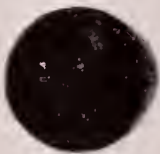
No.9

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No.10



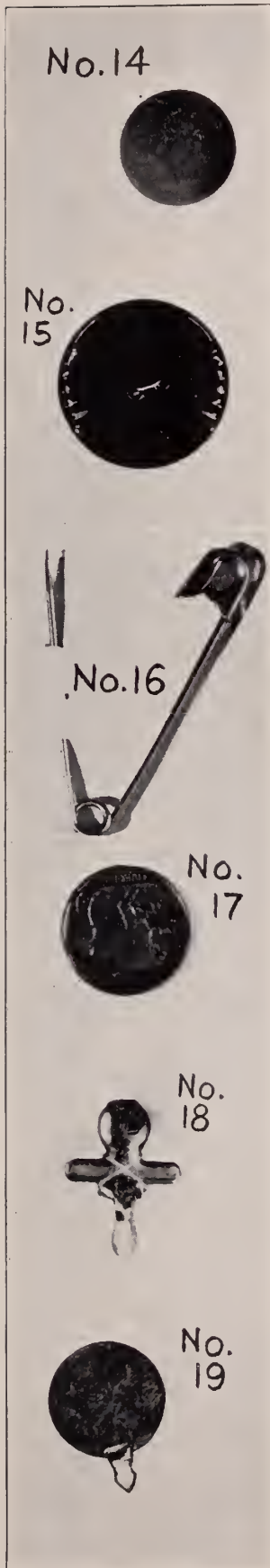
No.11

No.
12

No.13



<i>Age.</i>	<i>Foreign Body</i>	<i>Location</i>	<i>Anes- thetic</i>	<i>Result</i>	<i>Time</i>	<i>Comments</i>
22 Mos.	Iron staple.	Trachea. 14 hours.	None.	Death in 48 hours.	3 min- utes	Prolonged attempt at removal the night before. Preliminary tracheotomy in this case.
21 Mos.	Piece of watermelon.	Right lower lobe bronchus. 24 hours.	None.	Extrac- tion. Cure.	8 min- utes	Very difficult to distinguish from mucous membrane.
24 Mos.	Penny.	Esoph- agus. 3 hours.	None.	Extrac- tion. Cure.	3 min- utes	
3½ Years	Nickel.	Upper esoph- agus. 12 hours.	None.	Extrac- tion. Cure.	3½ min- utes	
3½ Years	Pearl button.	Upper esoph- agus. 14 hours.	None.	Extrac- tion. Cure.	3 min- utes	
2 Years	Penny.	Upper esoph- agus. 15 hours.	None.	Extrac- tion. Cure.	2½ min- utes	



<i>Age.</i>	<i>Foreign Body</i>	<i>Location</i>	<i>Anes- thetic</i>	<i>Result</i>	<i>Time</i>	<i>Comments</i>
3 Years	Penny.	Upper esoph- agus. 16 hours.	First attempt ether. Second none.	Extrac- tion. Second attempt cure.	5 min- utes first time. 2 min- utes 2nd time.	
6 Years	Overcoat button	Midway esoph- agus. 30 days.	None.	Extrac- tion. Cure.	7 min- utes	This case showed a great amount of infection. Perforation feared.
2 Years	Safety pin. Point up in tissue.	Upper esoph- agus. 16 hours.	None.	Extrac- tion. Cure.	5½ min- utes	
4 Years	Nickel.	Upper esoph- agus. 16 hours.	None.	Extrac- tion. Cure.	1½ min- utes	
26 Mos.	Top of motor meter. Toy automobile.	Upper esoph- agus. 7 hours.	None.	Extrac- tion. Cure.	3½ min- utes	
22 Mos.	Chewing tobacco tag. (Metal.)	Upper esoph- agus. 41 days.	None.	Extrac- tion.	First at- tempt 5½ min. 2nd at- tempt 2½ min.	There was a great deal of edema and secre- tion. Point was imbedded in lateral wall. It was first rotated and later removed.

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THE COUNTY MEDICAL SOCIETY

Hospital standardization, including organization of the Medical and Surgical Staffs, has done and is still doing a worthy work. In some respects, however, the staff activity has, without intent, encroached upon the field of the County Medical Society. The evident reaction is viewed by this latter organization with alarm and the time is ripe for a readjustment.

Recent bulletins from the American College of Surgeons call attention to this situation and advise staff conferences to devote their time to problems and liabilities arising in their particular institution, leaving scientific papers, addresses and academic discussions to the County Medical Society.

It is believed that the County Society when relieved of this rivalry can attract its members to meetings because they will not be "fed up"

on papers and speeches. As attendance is usually not compulsory, the meeting must be attractive. It has been suggested that fairly short and snappy scientific sessions should be preceded or followed by a social "get-together and feed," either regularly or periodically.

PRE-CONVENTION MEETING

The usual pre-convention meeting of the Association will be held in Tampa, January 26th, at 8 p. m. at the Tampa Bay Hotel. The officers, committeemen and councilors of the Association are urged to attend this meeting as many important matters will be brought before the attention of the meeting. The councilors are urged to have a written report of their work in their respective districts for presentation at this time. The scientific program committee will have the important task of formulating the program for the coming meeting. Those members of the Association who desire to present papers before the coming annual meeting are requested to communicate with the scientific program committee, the chairman of which is Dr. Leland F. Carlton, Citizens Bank Building, Tampa. The Section meeting of the American College of Surgeons for Florida, Georgia, Alabama, Mississippi and Louisiana will be held at the Tampa Bay Hotel January 26th and 27th and a very interesting clinical and scientific program will be presented and the members of the Florida Medical Association who attend our pre-convention meeting will enjoy the privilege of attending this interesting program. One hundred per cent attendance by the officers, committeemen and councilors is urged and expected.

STATE DUES

Your Journal is mailed regularly and gotten out with the use of acceptable material because the membership has been paying annual state dues. A Journal such as the one you are receiving cannot be printed without considerable outlay. Once each year an appeal is made for each member to pay his state dues. That time has arrived. It is hoped that every member of the Florida Medical Association will pay his dues before the annual meeting which will be held April 3rd and 4th at Tampa. The secretaries of the county medical societies are urged to collect and forward the state dues just as promptly as possible in order that the annual report may make the proper showing.

STATE NEWS ITEMS

The following scientific program was presented before the Pinellas County Medical Society during the month of December:

"Relation of Gastro-intestinal Diseases to Functional Nervous Disturbance."

J. A. Strickland, St. Petersburg.

"Physiology of the Cardiac Arrhythmias."

F. F. Kumm, St. Petersburg.

"The Curative Value of Florida Sunshine."

E. J. Melville, St. Petersburg.

"The Thymus Gland."

C. C. Rudolph, St. Petersburg.

"Arthritis Deformans."

G. M. Lochner, St. Petersburg.

* * *

Dr. E. G. Lindner and Dr. H. C. Dozier of Ocala attended the recent meeting of the Seaboard Surgeons' Association, held in Tampa.

* * *

At the regular monthly meeting of the Duval County Medical Society in January, Dr. Sheldon A. Morris gave a very interesting talk on his recent trip around the world, laying particular stress on the social and hygienic conditions in India and throughout the Orient. Dr. Upchurch, city health officer of Jacksonville, discussed the work of the health department. He stated that this department was called upon to do many things that had no relation to health work and asked the cooperation and moral support of the Society in righting this condition.

* * *

The Central Florida Medical Society met in regular semiannual session at Gainesville on the evening of November 17th. Twenty-three physicians and eight dentists, many of them accompanied by their wives, attended a dinner at 6:30, the Alachua County Medical Society acting as host. After a brief business session, the members enjoyed a scientific program which included a paper from H. A. Peyton, M.D., of Jacksonville, on "A Consideration of Some Surgical Lesions of the Large Bowel", and a paper from C. W. Moreman, D.D.S., of Ocala, on "Fractures of the Upper and Lower Jaws and Their Correction With the Dental Splint." The next meeting will be held in Eustis, February, 1928. The following physicians attended the meeting: Drs. J. M. Dell, W. C. Thomas, W. Lassiter, M. H. DePass, S. D. Rice, D. T. Smith, J. L. Summer-

lin, G. C. Tillman, Thos. A. Snow, Wm. S. Walsh, Gainesville; E. L. Biggs, Starke; C. M. Tyre, J. D. Coupland and M. M. Hannum, Eustis; S. C. Colley, Tavares; H. C. Dozier, A. H. Freeman, J. L. Chalker, J. N. Moore, E. G. Lindner, E. G. Peek, and H. F. Watt, Ocala, and I. E. Martin of Ocklawaha. The following dentists were in attendance: Drs. C. B. Ayer, G. C. Shephard and C. W. Moreman, Ocala; G. W. Schwalbe, Donald Morison, G. F. Robertson, C. G. Mixson, R. L. Bowman, and T. Byron King of Gainesville.

* * *

At the December meeting of the Dade County Medical Society, the following officers were elected to serve during 1928: Walter C. Jones, Miami, president; E. H. Adkins, Miami Beach, vice-president; R. M. Harris, Miami, secretary; C. E. Dunaway, Miami, treasurer, and Drs. H. C. Babcock, C. D. Cleghorn, and F. A. Vogt, Miami, censors.

* * *

Dr. Carlos F. Arroyo of Tampa announces the removal of his office to rooms 23 and 24, 1429 E. Broadway. Practice limited to internal medicine.

* * *

Dr. J. C. Crager has moved from Miami to Beaumont, Texas, where he will have offices in the Perlstein Building.

* * *

The members of the American College of Surgeons of Florida, Georgia, Alabama, Mississippi and Louisiana will hold their annual meeting in Tampa at the Tampa Bay Hotel, January 26th and 27th. Headquarters and registration will be at the Tampa Bay Hotel. Clinics will be held each morning from 8:30 to 10:30 at the various hospitals. Clinical addresses will be made each day from 11:30 a. m. to 12:30 p. m. at the Tampa Bay Hotel. A conference on the problems of the small hospital will be held from 10:00 a. m. to 12:00 noon, Thursday. Hospital conference for doctors and hospital executives from 2:00 to 4:30 p. m., Thursday, the 26th. A general meeting of the Fellows of the American College of Surgeons will be held 4:30 p. m. Thursday. Round table conference will be held from 9:00 to 11:00 a. m., Friday, the 27th. The scientific program will be presented from 2:00 to 4:30 p. m., Friday, the 27th.

(Continued on page 358)

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County Society	MEETINGS					Dues Paid.
	Secretary	Date	Time	Place	Luncheon?	
Alachua	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	81%
Bay	W. J. Blackshear, M.D., Panama City.					88%
Bradford	Seeber King, M.D., Lake Butler.					100%
Brevard	R. D. Ferguson, M.D., Titusville.	Varies		Varies		100%
Broward	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	100%
Columbia.....	P. C. Farnell, M.D., Lake City.	2nd Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	100%
DeSoto-Hardee- Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	100%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Arnold-Edwards Auditorium	No.	100%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	100%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	B. W. Lowry, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	City Hall	No.	98%
Jackson	T. H. Hudgens, M.D., Sneads.	2nd Tuesday	3:00 P.M.	Marianna	No.	81%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	94%
Lee	W. H. Grace, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	100%
Leon-Gadsden- Liberty- Wakulla- Jefferson.....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	74%
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	96%
Marion	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	96%
Monroe	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	100%
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Monterey Hotel	Yes.	92%
Pasco- Hernando- Citrus.....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	93%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	100%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	100%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Monday	8:30 F.M.	Varies	Yes.	100%
St. Lucie- Okeechobee- Indian River- Martin.....	G. C. Hardie, M.D., Ft. Pierce.					83%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	80%
Seminole	Chas. Park, M.D., Sanford.					100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	100%
Suwannee	W. C. White, M.D., Live Oak.					100%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	86%
Volusia	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	79%
Walton-	D. H. Simmons, M.D.,	2nd Thursday	8:00 P.M.	Varies	Occasionally	100%

Dr. R. D. Ferguson of Raiford was married to Miss Louise Rex Lockwood, R. N., of Norfolk, Virginia, in St. Augustine, November 9th.

* * *

The new Medical Arts Building of St. Petersburg held its formal opening during the past month. In an early issue of the Journal, a description of the building will be carried.

* * *

Dr. H. J. Coll of Miami announces the removal of his offices from the J. Bruce Smith Building to the Medical Arts Building, 7th Avenue and 11th Street North. * * *

At the regular meeting of the Palm Beach County Medical Society, held December 12th, the following officers were elected for the term of 1928: J. A. Powell, president; W. W. George, vice-president; S. W. Fleming, secretary; Lloyd Netto, treasurer; R. O. Cooley, censor.

* * *

At its regular bi-monthly meeting on December 14th, the Palm Beach Academy of Medicine had as its guests Dr. A. H. Weiland, orthopedist, Dr. J. H. Beckwith, exodontist, and Dr. W. J. Fitzpatrick, orthodontist, all of Miami.

In honor of these two noted specialists of the State Dental Association, the Academy entertained the Palm Beach Dental Society, who attended in a body. The visiting dental essayists were introduced by the president of the local dental society, Dr. R. L. Ward, of West Palm Beach, who expressed the appreciation of his society for the invitation to meet in joint session with the Academy.

Dr. W. E. Van Landingham, president of the Academy, said in reply that the Academy deemed it an honor to have them as guests, and that such joint meetings of the two professions should be encouraged, since the interests of both professions would best be served by such meetings.

Dr. Weiland, representing the medical part of the joint program, read a paper dealing with fractures of the wrist, and deformities resulting from improper reductions of such fractures.

He showed many slides, illustrating his paper, and brought out numerous points in the treatment which are ordinarily overlooked. Dr. Weiland is one of the most prominent of the younger orthopedic surgeons of the South, and the Academy feels itself honored by having heard this excellent paper.

(Continued on page 360)

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Patch's Nepto Lotion

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Surgeons, Physicians and Nurses are obliged to wash their hands very frequently. Mothers, too, who have their children to care for or housework to do, must have their hands frequently in water.

You know how hard it is to keep them from chapping during the cold weather. Here at last is the lotion that gives the desired protection.

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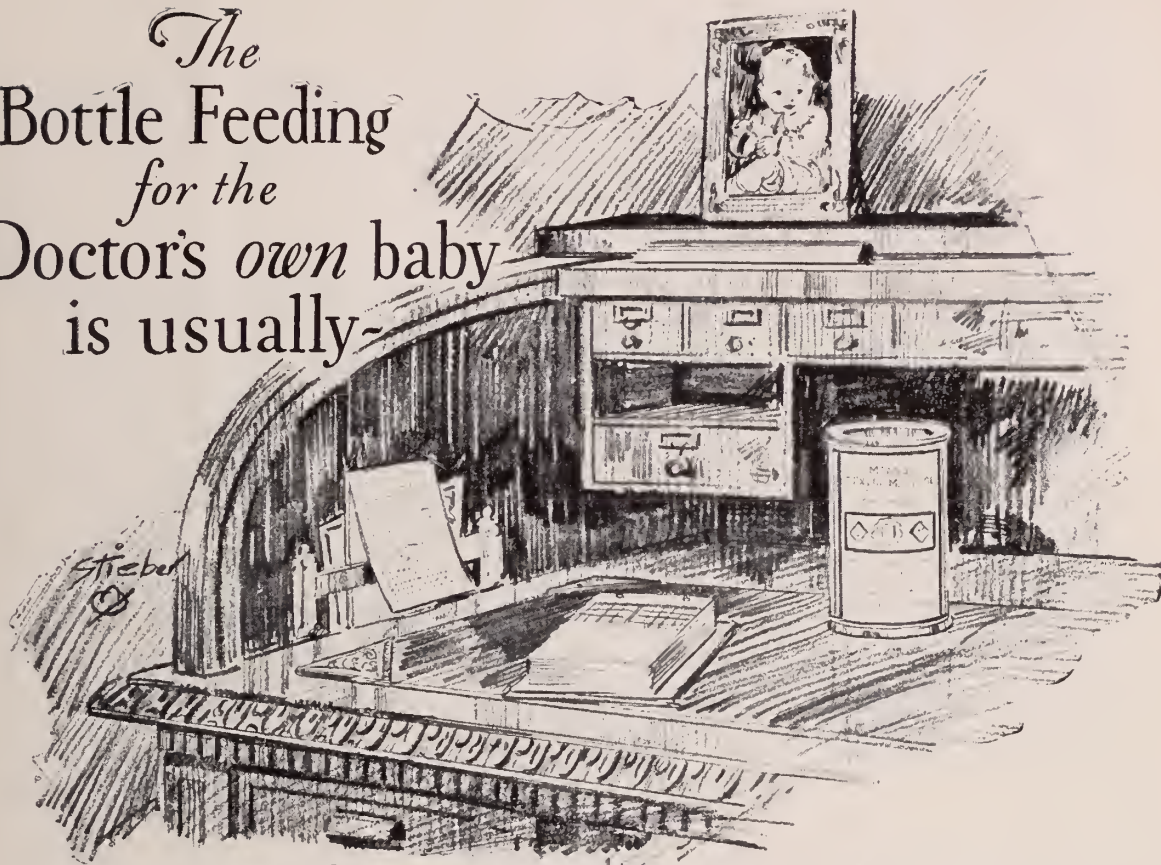
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Dr. Beckwith, presenting his paper, called attention to the fact that many acute general infections throughout the body, of obscure origin, may be definitely traced to infected, or carious teeth, and emphasized the importance of closer cooperation between the two professions, in order that the etiology of such diseases may be accurately determined.

It is to be regretted that Dr. Beckwith's paper could not be heard by every physician within the state, since it was a masterly one, showing profound thought and study on his part in its preparation.

Dr. Fitzpatrick did not read a paper, but gave a splendid discourse, dealing with orthodontia and its relations to medicine.

Out-of-town physicians and dentists attending the meeting were: Drs. Robinson, Hendricks, Brown and Adams, of Fort Lauderdale, and Drs. Walker and Butler of Hollywood, as well as several dentists and physicians from Delray and Lake Worth.

Following the scientific program, a buffet supper was tendered the guests by academy members.

* * *

Dr. S. B. Newton, formerly of 57 W. 58th street, New York, announces the opening of offices at 168 Sea Breeze Avenue, Palm Beach, for the practice of internal medicine.

* * *

At a meeting of the DeSoto-Hardee-Highlands County Medical Society, held in Arcadia, December 13th, the following officers were elected for the ensuing year: Howard V. Weems, Sebring, president; A. A. Poucher, Wauchula, vice-president; C. H. Kirkpatrick, Arcadia, secretary-treasurer. At this meeting, the Society had as its guest, Dr. Willis Westmoreland of Atlanta, Georgia, ex-professor of surgery at the College of P. & S., Atlanta.

* * *

THE DADE COUNTY MEDICAL SOCIETY COMES TO THE FORE WITH 100% PAID MEMBERSHIP FOR 1927. THIS SOCIETY LEADS ALL OTHERS IN MEMBERSHIP, HAVING REMITTED FOR ONE HUNDRED SIXTY-EIGHT MEMBERS DURING THAT YEAR. CONGRATULATIONS TO DADE COUNTY MEDICAL SOCIETY AND ITS ABLE SECRETARY AND TREASURER.

(Continued on page 362)

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At the December meeting of the Escambia County Medical Society, the following officers were elected: C. W. D'Alemberte, Pensacola, president; W. A. J. Pollock, Pensacola, vice-president; J. M. Hoffman, Pensacola, secretary-treasurer; and Drs. C. Hutchinson, A. M. Ames and M. E. Quina, Pensacola, censors.

* * *

The Medical Arts Laboratory of St. Petersburg, under the direction of Dr. W. C. McConnell, is now open.

* * *

At the December meeting of the staff of the Pensacola Hospital, held December 13th, the following officers were elected: C. Hutchinson, president; W. C. Payne, vice-president; C. J. Heinberg, secretary.

* * *

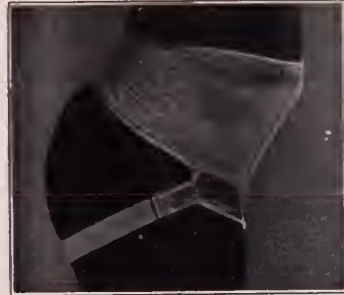
The regular meeting of the Suwannee River Medical Society was held in Madison on Friday evening, December 9th, at the Hopkin's House. After the supper and social hour the President, Dr. Eustace Long, called the association to order. On completion of the usual routine of business the scientific program was taken up. Dr. Robert B. McIver of Jacksonville gave an interesting talk on abdominal tumors, which was illustrated with lantern slides showing some of the cases coming under his observation and treatment. The discussion of Dr. McIver's subject was entered into by Doctors Harkness, Bates, Dyer, Anderson and Gable of Lake City, Dr. Eustace Long of Madison and Dr. E. F. Wahl of Thomasville, Georgia. After the conclusion of the scientific program the election of officers for the year 1928 followed.

Dr. T. S. Anderson of Live Oak was elected president; Dr. George Davis, Madison, first vice-president; Dr. Dan N. Cone, White Springs, second vice-president; Dr. Robert B. Harkness, Lake City, third vice-president, and Dr. L. J. Arnold, Lake City, secretary and treasurer. The Society adjourned to meet in Live Oak the second Friday night in January, 1928. Those present were as follows: Drs. Geo. Davis, A. L. Blalock and Eustace Long, Madison; Drs. Robert B. McIver and E. T. Sellers, Jacksonville; Drs. W. M. Ives, J. D. Gable, P. A. Tatum, L. M. Anderson, J. H. Dyer, R. B. Harkness, Herbert Caldwell, T. H. Bates and L. J. Arnold, Lake City; Dr. T. S. Anderson, Live Oak; Dr. D. E. Cline, Wellborn; Dr. R. E. Dicks, Dowling Park; Dr. E. F. Wahl, Thomasville, Georgia.

(Continued on page 364)

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* * *

It was recently announced that Dr. Bert Caldwell, who for some time past has been superintendent of the new Tampa Municipal Hospital, has been elected secretary of the American Hospital Association with headquarters at Chicago.

* * *

Dr. Edmund H. Teeter of Jacksonville was recently elected commander of the Edward C. DeSaussure Post No. 9 of the American Legion.

* * *

At the December meeting of the Hillsboro County Medical Society, the following officers were elected: R. C. Hubbard, Tampa, president; A. R. Beyer, Tampa, vice-president; Frank T. Barker, Tampa, secretary-treasurer; A. C. Ives, Tampa, censor.

* * *

Dr. Jack Halton of Sarasota recently attended the Twenty-fourth Annual Meeting of the Seaboard Surgeons' Association in Miami.

* * *

Miss Ora B. Davis and Dr. T. D. Gunter of West Palm Beach were married in West Palm Beach October 13, 1927.

* * *

Dr. S. S. Bridges of River Junction died after a few hours' illness on October 25, 1927.

* * *

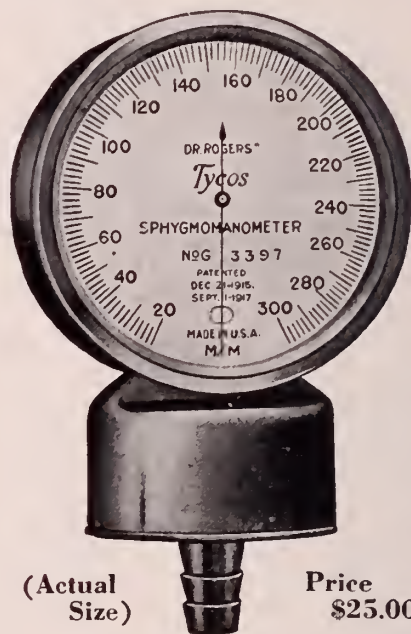
The Lake County Medical Society held its December meeting December 1st at the Biltavern Hotel, Tavares. This meeting brought the largest attendance of the year. The members of the Society enjoyed a chicken dinner after which officers were elected for the ensuing year, as follows: M. M. Hannum, Eustis, president; H. K. Morrison, Leesburg, vice-president; W. L. Ashton, Umatilla, secretary-treasurer. Among the visiting doctors was Dr. Frederick Bowen of Jacksonville, who read a paper on "Tuberculosis Infection of the Kidney." It was decided by the Society that future meetings would be held at Eustis on the first Thursday of each month.

* * *

Dr. and Mrs. F. L. Fort of Jacksonville are celebrating the arrival of a daughter, born December 13th.

(Continued on page 366)

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Dr. W. S. Manning of Jacksonville attended the recent meeting of the Seaboard Surgeons' Association in Miami.

* * *

At the December meeting of the Volusia County Medical Society, the following officers were elected: L. W. Glatzau, DeLand, president; J. B. Davis, Daytona Beach, vice-president; R. L. Miller, Daytona Beach, secretary.

* * *

Dr. Earl McRae of Tampa recently returned from a three months' trip to the clinics of Vienna, Paris, London and Berlin.

* * *

The Twenty-fourth Annual Meeting of the Seaboard Surgeons' Association was recently held in Miami. About three hundred and fifty surgeons were present. An excellent program was rendered and the entertainment features were most enjoyable.

* * *

Miss Winifred Snell and Dr. Jack Halton of Sarasota were married Thanksgiving day in Sarasota.

* * *

Owing to the opening of Tampa's new Municipal Hospital, Dr. Helms has closed the Bayside Hospital.

* * *

At the December meeting of the Duval County Medical Society, the following officers were elected: S. E. Driskell, president; Edward Jelks, vice-president; Kenneth Morris, secretary; W. McL. Shaw, treasurer; John E. Boyd, censor.

* * *

At the recent meeting of the Radiological Society of North America, held in New Orleans, the following Florida radiologists were in attendance: J. C. Dickinson, Tampa; J. N. Moore, Ocala; J. M. Hoffman, Pensacola; and W. McL. Shaw, Jacksonville.

* * *

Dr. R. D. Ferguson of Titusville was recently appointed physician at the Prison Farm at Raiford, succeeding Dr. E. R. Marshburn, who has moved to Marianna.

* * *

Dr. W. W. Hardman, formerly of the Duval County Hospital, Jacksonville, has recently moved to Titusville, where he has taken over the practice of Dr. R. D. Ferguson, recently appointed to the State Prison Farm.

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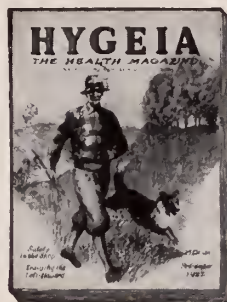
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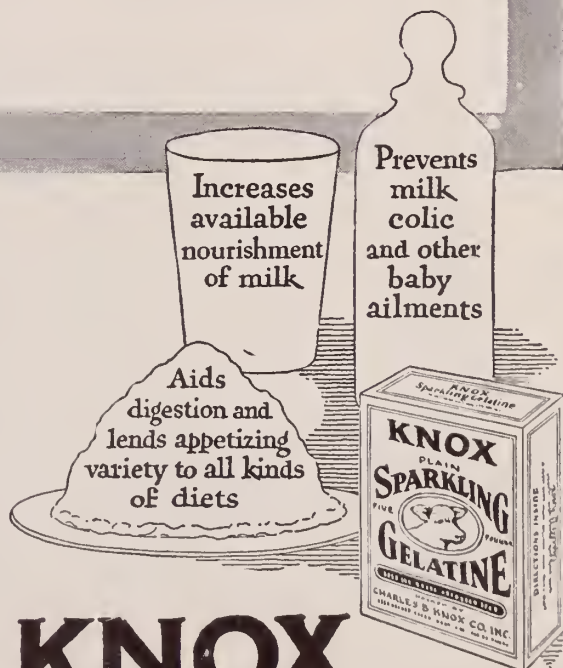
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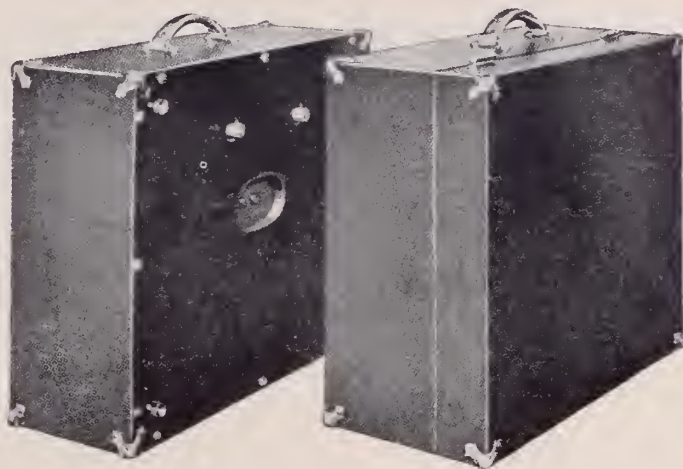
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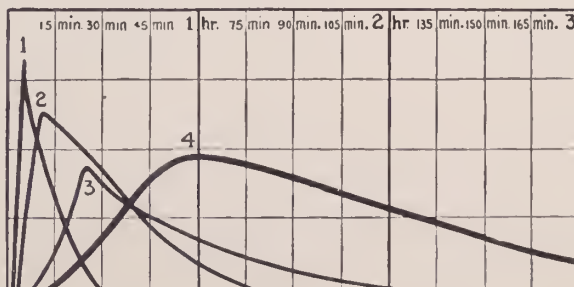
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EYE CONDITIONS THAT CONCERN THE PRACTITIONER

JOHN M. WHEELER, M.D.,
New York City.

In dealing with my subject, I assume that it will be agreeable if I confine myself largely to suggestions for the practitioner of medicine that may be of use to him in advising patients who may have to consult eye specialists. Patients are sometimes the victims of the overenthusiasms of specialists, and not the least among specialists are ophthalmologists. The practitioner who can protect his patient against the imbalance of specialism, advising him wisely, is rendering a valuable service. The specialist must be enthusiastic in his branch of medicine, and the non-specializing practitioner must see to it that the specialist keeps his balance and keeps his place.

REFRACTION

Not many years ago, a well-known oculist said that his idea of heaven was a place where there were no errors of refraction. Lack of proper training and lack of proper interest in refraction led him to this attitude. Every estimation of a patient's refractive condition has speculative interest for the oculist, and such interest should never be allowed to lag because of superabundance of material. Judgment, often a fine sort of judgment, is called for in advising patients who manifest errors of refraction. Too many people are wearing glasses. Instead of wise and thoughtful advice on the part of the ophthalmologist, overenthusiasm, error of judgment and mechanical ease of prescribing, contribute to this state of affairs. On the part of the optician, supreme interest in receipts has an influence. The result is that any oculist who practices a scheme for removal of glasses from patients has a fertile field. All oculists should be in the habit of ordering the discontinuance of unnecessary glasses.

Lenses should be prescribed either to furnish better vision or to relieve symptoms, or both. Working out problems in refraction, coming to

decisions as to whether or not patients should wear glasses, figuring out what lenses good judgment would allow in case of necessity for the patient's wellbeing, wise counsel for the patients and their physicians—this is interesting and important work. There are patients who have the idea that they will "ruin" their eyes if they don't wear glasses. Seldom is a patient's failure to wear glasses responsible for a serious eye condition, so I think it is fair to patients that they should feel free in a general way to follow their inclinations or their own judgment in the amount of use that they make of glasses, depending on how much gain is furnished by them.

In hyperopia (farsightedness) all rays of light entering the eye come to a focus behind the retina unless they are brought to a focus by use of the accommodation or by use of lenses or both. Hyperopia is usual and normal in childhood. As the child grows the eye enlarges and hyperopia decreases. If there is not a good reserve of hyperopia it may be entirely lost during growth and myopia may develop. In my opinion it is absurd for the oculist to order glasses for a child simply because he has considerable hyperopia and by the oculist's theory may be having eye strain. Most children can furnish the necessary accommodation without undue strain. To be sure, nearly all children are keen to wear glasses and they will give expression to any symptoms that they think necessary in order to get them, and the doctor who refuses to prescribe them must run the risk of becoming very unpopular with his little would-be patients. In dealing with children the doctor must estimate the proportion of genuineness in the expressed symptoms and the proportion of commendable fabrication or imagination. When, however, there is genuine strain with symptoms referable to it glasses may be prescribed for either temporary or long-continued wear with most satisfying results.

Astigmatism is a structural condition of the eye in which light rays do not come to a focus. In small amount it may cause symptoms such as fatigue or headache, and in large amount it may

cause impairment of sight as well. I certainly would not prescribe correcting lenses unless there is likelihood that the astigmatism is responsible for trouble. There are very few eyes that have no astigmatism.

Myopia (nearsightedness) calls for glasses to give good distant sight and should not be regarded as serious unless it exists in large amount. In this condition the rays of light from distant objects focus in front of the retina so the myopic eye may be thought of as an oversized eye. During the growing period the eye gets gradually slightly larger, so myopia increases with body growth. Inasmuch as the years of physical growth are school and college years, there is a natural tendency to associate increase in myopia with reading and study, but there is no convincing evidence that close use of eyes is responsible for increase in myopia. So, unless the nearsightedness is large in amount, discontinuance or restriction in reading should not be ordered as a rule. In other words, I should not advise interruption or limitation of one's mental development on account of a small or moderate amount of myopia. Myopia predisposes to detachment of the retina, but the likelihood of detachment is inconsiderable so I should not advise abridgement of one's physical development or physical welfare on account of it. There is a popular belief that nearsightedness disappears in old age, but this is not so. Elderly nearsighted people are prone to take pride in their ability to read without glasses and are willing to go without good distant vision rather than to wear glasses. Any myopic or highly astigmatic person can sharpen his distant vision by skillful narrowing of his palpebral fissure (squinting).

One sometimes hears of patients who have been "cured" of myopia, so it may be in place for me to say that we have no remedial scheme for making an eye smaller or for in any other way reducing myopia.

Strabismus frequently calls for advice to patients or more often to parents. When true squint exists, neglect is not in order. Too often parents are advised to leave alone babies with convergent squint with the assurance that "they will grow out of it." The belief that commonly infants are crosseyed has resulted from faulty observation, and the recovery that is so often apparent is from a pseudo-squint and not from a real one. In such cases the inner canthi are

set widely apart, and the cornea are near the inner ends of the palpebral fissures so that very little sclera shows to the inner sides of the corneas. This gives the appearance of convergent squint when it does not exist, and it has nothing to do with the axes of the globes. When the bridge of the nose develops and the inner canthi are drawn relatively inward, more sclera shows to the nasal sides of the cornea and the apparently crooked eyes appear to straighten. To judge roughly as to whether eyes are straight or crooked the physician should learn to regard the relative positions of the corneal light reflexes in the two eyes. These reflexes are in approximately corresponding places if the eyes are straight, not so if there is a squint.

If a true strabismus exists it should have early attention with two chief objects. First, the vision should be developed and maintained in the two eyes. Second, binocular single vision, with fusion of images in the two eyes should be developed if possible. In order to accomplish the second objective early operation may be necessary and I am unorthodox enough to advocate that operation be performed as soon as it is evident that non-operative procedures will not suffice. If properly selected and properly performed only good can result. It is not necessary for me to point out the embarrassment, self-consciousness and sense of inferiority that crosseyed children have to endure, and I believe they should be saved all this if possible. Let me advise that expert care be put into operation early in all cases of squint.

CATARACT

Cataract is opacity of the crystalline lens. Opacity may occupy a lens in any proportion from an insignificant part in some cases up to the entire lens in others. The interference in vision depends not only on the amount of opacity but also on the position. In elderly people a few opaque spots in the periphery of the lens appear as a rule, and it is unfortunate that the term "cataract" is used for these. Much more often than not blindness fails to result, and no mention should be made of these to patients, although descriptive notes should be made of them. More significant than a few opacities is the development of myopia in senile cases. This results from swelling of the lens fibers and gives rise to the well-known "second sight" that enables old people to lay aside their glasses and leads to so

much boasting. Second sight means development of cataract, but not necessarily development to maturity and blindness before death interrupts the process. In cases of oncoming blindness from cataract the question comes to the doctor over and over again, "Is there any cure for cataract except operation?" or "Is there any way of stopping them?" Many suggestions have been made for local and general treatment to arrest or eradicate cataract, and there might be a reasonable difference of opinions as to their value. However, it will be fair for me to say that I am not convinced that there is any value in any of them. But it can be said with assurance that operative treatment of cataract is most satisfactory. Properly performed cataract extraction is one of the most beneficent things that surgery can offer. In most cases normal sight or nearly normal sight can be made to result, with almost no risk of accident. It can be said also that a patient with cataracts does not have to wait until he is blind before extraction can be performed with safety. I might add that senile cataract extraction should not be regarded as an easy procedure. It calls for skill and precision, but if these are exercised sight will almost surely result.

In case of congenital cataract fine judgment is sometimes required from the surgeon for a proper decision as to whether operation is best or not, for congenital cataracts are oftentimes incomplete. The doctor should bear in mind that loss of the power of accommodation follows removal of the cataractous lens, and in a young person such loss is important. Certainly not all congenital cataracts should be operated upon. But if operation is deemed necessary, when should it take place in congenital cases? I should say the earlier the better so that central vision will be allowed to develop before nystagmus starts.

GLAUCOMA

One can almost say that the time has gone by when acute glaucoma is diagnosed "neuritis and acute gastritis" or as "cold in the eye." This condition is a serious one and calls for prompt action. If it does not yield to strong eserine medication operation should be performed. Tridectomy will almost surely reduce the tension in the ordinary acute type, and if done soon enough it will restore useful vision. It must be added, however, that there is appreciable risk in opera-

tion for acute glaucoma as there is a possibility of intraocular hemorrhage if the vessels are sclerosed.

In chronic glaucoma there is a genuine difference of opinion as to the advisability of operation. The difference is so wide that some ophthalmologists consider every case of chronic glaucoma a surgical case while others are totally opposed to operation. Manifestly both extreme groups are wrong. I think the case can be stated very simply. In many patients ocular hypertension can be controlled indefinitely by the use of pilocarpine and eserine, and the tension can be estimated with reasonable reliability with the tonometer. As long as the tension can be kept within normal limits with medication, and as long as the patient holds his own in visual function, such medication should be continued, for operation could not do more. (Another factor should be mentioned: occasionally either eserine or pilocarpine causes such a severe reaction that one is forced to operate on account of it. If medications fail to control tension, operation should be resorted to.

What prognosis can be given if the surgeon is forced to operate? In a high percentage of cases normal or nearly normal tension can be attained and kept and the risk from operation is not great. However, a glaucoma patient cannot be dismissed after operation as one can never be sure that tension will remain controlled, and function must be safeguarded. Chronic glaucoma is an insidious process and it must be watched whether operation has been performed or not.

OCULAR MANIFESTATIONS IN PREGNANCY

That pregnancy is responsible for contraction of the visual fields from enlargement of the hypophysis has been demonstrated satisfactorily. In 1922 Finley of Havana reported that "during pregnancy there often occurs, as a result of the normal hypertrophy of the pituitary gland in connection with this state, a compression of the chiasm which manifests itself by changes in the visual fields in the nature of a bitemporal contraction, which varies in degree according to the amount of compression suffered, this depending on the corresponding amount of hypertrophy and on the anatomical peculiarities of the case which may favor or hinder this compression." There is no impairment of the central vision due to the hypophyseal enlargement and the fields are not contracted enough to interfere with the pa-

tient's getting about safely. The phenomenon manifests itself during the last few weeks of pregnancy and disappears after parturition. It occurs in primiparas and multiparas. While this condition is interesting, it probably is not of great importance in its immediate manifestations and it is believed that there are no unfortunate late results.

Rarely optic nerve atrophy unassociated with retinitis develops late in pregnancy. This is thought to be the result of retrobulbar neuritis caused by the toxemia of pregnancy. It may result in partial or complete pallor of the nerve heads with partial or complete blindness. With the knowledge that the hypophysis is enlarged late in pregnancy it may be well for us to have in mind the possibility that in rare cases the enlargement might be great enough to cause pressure atrophy of the chiasm and optic nerves.

Choroiditis, although not generally recognized as a manifestation of toxemia of pregnancy, I think should be given a place among the important eye conditions caused by the gravid state. I have seen several cases of well developed exudative inflammation of the choroid in pregnant women who were sound except for their pregnant condition. The choroid is a highly vascular structure, and pathological response to pregnancy toxemia should not be considered a strange thing. In choroiditis the prognosis as to vision depends upon the location of the lesion. The portion of the retina which corresponds to the choroidal lesion is robbed of its function. If the lesion is in the macula, which provides central vision, serious permanent impairment of sight will result; but if the choroidal inflammation is away from the macula, the resulting blind area will not be important. Fortunately, the choroiditis most often affects only one eye, so there is small chance of serious impairment of sight in both eyes. In cases of development of choroiditis in both eyes or in a patient's only good eye, induction of labor might be wise.

Spasm of Accommodation.—Rarely the pregnant woman may be alarmed by impairment of her distant vision due to over-action of the ciliary muscle, resulting in a spasm of accommodation, the equivalent of myopia. She sees well (perhaps better than normal) for reading but at a distance her sight is blurred, and it may be necessary for her to wear concave lenses in order

to have good distance sight. Presumably toxic substances stimulate the muscles of accommodation to a condition of mild spasm. The condition may continue for a few weeks after delivery, but relaxation gradually returns without serious consequences.

Hemorrhagic retinitis is the best known eye complication of pregnancy and the most important. Its presence may carry heavy weight with the obstetrician in his decision to induce labor, both because of its danger to the patient's sight and because of its significance in regard to the general condition of the patient. Without going into technical detail, it may be said that there are two types of retinitis in pregnancy, one associated with acute toxemia and the other with chronic cardiorenal disease. The retinitis appears during the latter part of pregnancy, and may occur in either primiparas or multiparas.

Each case of pregnancy with hemorrhagic retinitis should be judged by itself, but it can be said that the development of retinitis is always of serious import, and usually indicates prompt termination of labor. It is not necessary for me to say here that the lives of both mother and baby are at stake. As to the mother's eyes it may be said that some damage always results from retinitis. Blindness either complete or partial in both eyes is the usual outcome if the condition is allowed to remain long. In some cases, however, the optic nerve and retina are not badly injured and useful vision may result. Fortunately, the development of retinitis in one pregnancy does not mean that it will necessarily appear in succeeding pregnancies.

Uremia Amaurosis.—While all obstetricians are familiar with hemorrhagic retinitis of pregnancy many do not know of the rarer condition of uremic amaurosis, quite a different sort of a process. In this condition the patient loses the sight in both eyes, but ophthalmoscopic examination reveals nothing abnormal. The blindness is due to the toxic effect of uremia on the brain cells and not to involvement of the optic nerves or eye structures. Inasmuch as the process is supranuclear the pupils react to light, both directly and consensually, although the patient is blind. If the patient recovers from her uremia the sight is surely restored, and in this regard the prognosis is quite different from that in albuminuric retinitis.

NORMAL DIET FOR DIABETICS*

ARTHUR L. WALTERS, M.D.,
Miami Beach.

The question of the best diet for diabetics is an old subject, on which it would seem all variations have been played. There have been low carbohydrate diets, low protein diets, high fat diets, diets balanced according to chemical reactions between glucose and fatty acids and finally undernutrition and starvation diets. It would seem that no new combination could be found, but since the advent of insulin, we can add to the above list, high carbohydrate diets in diabetes.

Dr. W. D. Sansum was the first to advocate the higher carbohydrate diets with increased insulin dosage. His article was published in the *Jr. A. M. A.* Jan. 16th, 1926, and brought out the fact that this was a safe procedure which benefited the patient both mentally and physically. It was after talking to Dr. Sansum in July, 1925, that I first began using high carbohydrate diets in treating certain selected cases of diabetes and called these diets "Normal Diets" inasmuch as they approached more closely the diet consumed ordinarily by a normal individual.

With the proper regulation of the insulin dosage any amount of carbohydrate may be safely given to the most severe diabetic. Now the question arises, since this is so, why should not a diabetic have a normal diet?

No exact definition may be given for the term normal diet, but based on dietary studies it may be said that the minimum protein intake of ordinary individuals is certainly not less than one gram per kilogram of body weight and that ordinarily a normal person will eat from two to four times as much carbohydrate as fat. Chemical study of the nitrogen equilibrium of the body would indicate that one gram or even a little less than one gram of protein per kilogram is amply sufficient.

In order to plan a diet of the character suggested, one may start with one gram of protein per kilogram of body weight of the patient and add carbohydrate and fat in the proportion of two to one, in sufficient amount to make up the total calories required by the individual. The caloric requirement of a patient can only be determined by trial and the use of scales. The

least number of calories which will maintain an individual at a normal or a desirable weight under existing conditions is the caloric requirement. This naturally varies among other things with the amount of activity to which the patient is subjected in his daily life.

As a concrete example of calculating such a diet, let us suppose the patient weighs sixty kilograms and requires about 1800 calories to maintain his weight. Of this total 240 calories will be supplied by 60 grams of protein, leaving 1560 to be supplied by carbohydrate and fat, in the proportion of 2 grams carbohydrate and 1 gram fat. Two grams carbohydrate equal 8 calories and 1 gram fat equals 9 calories, so that for each 17 calories there will be 2 grams of carbohydrate and 1 gram of fat. Dividing 1560 calories by 17 gives 92, the number of grams of fat and twice this amount, 184, the grams of carbohydrate. The patient would, therefore, have a diet of 184 grams of carbohydrate, 60 grams protein and 92 grams fat, with sufficient insulin to keep the urine sugar free and the blood sugar at a fairly normal level. The diet for the same individual under the most commonly used diet at the present time would be 60 grams carbohydrate, 60 grams protein and 150 grams of fat. As a matter of gastronomic desirability, I invite any one to try these two contrasting diets.

As a proof of the feasibility of such a diet for a diabetic at no greater cost and with subjective and objective benefit, I submit the history of the patient who has been followed longest and most carefully. Other patients have responded in like manner.

The patient was first treated in September, 1923. He was a college sophomore, 23 years of age. He had the diabetes for two years and on a carefully and properly regulated diet had maintained a fair weight and good health until a few months prior to coming to the clinic. He had recently been losing weight on the diet which would prevent glycosuria.

He entered the hospital September 12th and was discharged September 17th, at which time he was sugar free on a diet of 80 C-65 P-180 F and 30 units of insulin daily, with a body weight of 60 Kg.

He reentered the hospital in October with a severe case of tonsillitis and a moderate degree of acidosis. Following recovery from the illness, his tonsils were removed and he returned

*Read before the 54th Annual Meeting of the Florida Medical Association, West Palm Beach, April, 1927.

home December 15, 1923, on a diet of 65-60-160 and 34 units of insulin. He weighed 64 Kg.

He entered the research laboratory of Eli Lilly and Company as assistant in April, 1924, and since that time has been under the closest observation and had no less than 519 blood sugar tests from April, 1924, to June, 1926, and, I might add, with no resultant anemia even though a daily average of almost 2 cc. of blood was removed for two years.

In April, 1924, he weighed 62 Kg. His diet was 90 C-70 P-210 F, furnishing 2530 calories. His daily dose of insulin was 38 units.

May 19, 1924, his diet was changed to 87 C-63 P-210 F, equaling 2490 calories and his insulin dose increased to 42 units per day in order to bring his blood sugar to a lower level. This diet and dose remained constant until August 4, 1924, when the fat was reduced 10 grams because he had gained to 64 Kg.

The diet and dose remained the same from August 4 till October 14th, during which time the patient gained 3 Kg. On October 14th, 1924, his diet was changed by again lowering the fat 10 grams, so that his diet became 87 C-63 P-190 F, a total of 2310 calories. His weight was 67 Kg. He remained constantly on this diet for nine months, that is until July 14th, 1925. His weight remained practically the same. His insulin for eight months had been between 50 and 56 units per day, and during practically this whole period his blood sugar had been kept at a sub-normal level in an endeavor to see if "resting" the pancreas would ultimately increase the patient's glucose tolerance. It may be said that if there was any gain in tolerance as a result of eight months low blood sugar, it was negligible.

On July 13th, the diet was still 87-63-190, a total of 2310 calories; the total glucose 142 grams and the insulin 50 units daily. The next day the diet was suddenly changed to a high carbohydrate diet and the fat lowered in such amount as to give about the same number of calories as previously, namely, 2309. The protein remained the same. The diet given was 242 grams C-63 P-121 F; in other words, a two to one ratio instead of a one to two ratio of C to F, and contained 290 grams glucose. The insulin was increased 38 units in order to take care of the additional 148 grams of glucose, calculating that each added unit of insulin would take care of 4 grams added glucose. How nearly correct

this was may be seen from the fact that the blood sugar remained the same for nine days, after which it began to diminish. As a result the insulin was gradually lowered until the blood sugar became stabilized at the level maintained on the original lower carbohydrate diet. In the course of two and one-half months, it was necessary to lower the daily dose of insulin 16 units in order to avoid hypoglycaemia and for a subsequent period of two and one-half months, the same diet and insulin dosage was maintained with the blood sugar at or below the normal level. During this period of five months the body weight did not materially change. The final insulin dose was 72 units per day. Apparently after being stabilized on a low carbohydrate diet and insulin for a period of fifteen months, there was a material gain in tolerance for glucose as a result of giving a high carbohydrate diet for two and one-half months. This gain, however, may have been more apparent than real. During this period the patient's mental outlook was vastly improved, and he felt much better physically.

Naturally, as with any innovation, such as this one started by Dr. Sansum, there will be certain questions and criticisms.

The question of cost due to the increased dose of insulin required may be answered by saying that the lessened cost of the high carbohydrate diet itself more than offsets the added cost of the additional insulin. In the case above cited, the added insulin per day cost 16.5 cents, while the high carbohydrate diet was 18.3 cents cheaper.

The danger of large doses of insulin may be next considered. It has been shown that with large amounts of carbohydrate in the diet, there is less fluctuation in the blood sugar per unit of insulin, so that actually the factor of safety is greater. It would seem to be true, however, that the symptoms of hypoglycaemia under these conditions are different from those usually described; namely, there is more mental confusion and less of the physical signs such as hunger, weakness and sweating.

The bulk of material to be injected when larger doses are given offers no objection as insulin containing 40 and 80 units per cc. is now available.

Personally, I would not advocate increased carbohydrate in the diet of any diabetic who can remain sugar-free and in even moderately good condition without the use of any insulin. I

would not recommend it in the majority of patients who are now doing well on one injection of insulin daily.

I would use the so-called "normal diet" in all intelligent patients, who now require two or more injections of insulin daily; and particularly do I deem this desirable in those patients in the active period of life, as their economic status, to say nothing of their general wellbeing, is greatly benefited thereby.

I would use higher carbohydrate feeding with children for several reasons: they usually require more than one dose of insulin daily, they are more prone to acidosis under the higher proportion of fat in the usual diabetic diet, and they often surreptitiously obtain carbohydrate when this is too severely curtailed in their diet.

CONCLUSIONS

The advantages to be gained by a more nearly normal amount of carbohydrate in the diabetic diet are—

1. It approaches the normal metabolic requirements.
2. It produces a more healthful state of mind and body.
3. It is more convenient and no more expensive.
4. It satisfies the patient and does not make him an object of remark or pity.

Since diabetes is due to a deficiency of insulin, it would seem logical to supply the deficiency rather than curtail certain elements in the diet below a physiological level.

DISCUSSION.

Dr. R. H. Mooty, Winter Haven:

I certainly congratulate Dr. Walters on his very interesting paper. I shall not discuss it in detail, but I want to make some comment. Where we do not have access to a blood chemistry laboratory, it is very difficult to handle a diabetes case properly.

The common sense feature of the paper is what appeals to me. Why in the name of common sense does it take we men, and women, too, so long to stumble over a thing before we can see it? Why, when a man is suffering from diabetes, should the doctor be afraid to give him any more to eat than to just keep him going along? Why not put him back to be a normal man eating normal food?

Dr. Woodyatt recently in Cleveland at the Post-Graduate Assembly, had a man in the clinic

who had been a metal polisher, earning \$40.00 per week. He developed diabetes, and although he had been put back on his feet, he was not physically able to work at his former trade, so he was clerking at \$26.00 per week. Dr. Woodyatt suggested probably it would be better to put him on more insulin with more carbohydrates with it and go back to his old job. If you try to get too much mileage in driving your automobile and cut the gas down, it overheats your motor; if you have it too rich, it chokes up. So it is a common sense proposition. Feed him what it takes to make a well man, *i. e.*, a well man and able to carry on by the use of insulin to keep the body chemistry going near enough normal to keep out of trouble.

Dr. M. J. Flipsc, Miami:

I think Dr. Walters is to be very highly commended for bringing this important advance in the dietary management of diabetes to our attention. I agree that the diet more nearly approaching the normal diet is to be greatly preferred. There is, however, a very choice selection to be made of these particular cases. Dr. Walters mentions some of the criteria on which we base this judgment. The patient who can get along without a hypodermic injection of insulin and can be managed by diet is probably better off with the diet. The patient who can subsist on one injection of insulin in the morning and a slightly modified diet should get that one injection. There are also those cases of moderately advanced diabetes who require two or three injections of insulin daily. There is a fourth class I would feel the insulin dosage is so large compared to the tolerance of the individual, that the diet had better be even more rigid than our ordinary diabetic diet.

I should like to describe one of the most severe diabetics I have ever seen, and because it presents certain peculiar abnormalities in nutrition, I feel it will be of value to know about this case.

The patient, age 35, came to my attention two and a half years ago in practically a diabetic coma. Weight 79 pounds. She had had insulin with a very rigid diet, with resulting decrease in blood sugar and loss of weight. She was placed in the hospital, suffering from exophthalmic goitre, which was considerably toxic. The patient was put upon a very low carbohydrate diet following the method of Woodyatt, giving very high fats. She gained in weight to

110 pounds. The thyroid was removed under local and gas anesthesia. The patient made a very stormy recovery, but after passing the danger line, again was placed upon her dietary regime. Some time later, a tumor appeared in one of the breasts that had malignant characteristics. This was removed. This time she had a less stormy recovery.

The interesting feature is that through the two and a half years the patient has gained in weight from 70 pounds to 135, a very little short of her normal weight. The blood sugar has been permitted to remain slightly above the normal. We do not reduce the blood sugar until the percentage runs over .24 per cent. We have considered the patient in good shape if the blood sugar runs .15 per cent to .2 per cent. She is eating 35 grams protein, 25 grams carbohydrates and 85 grams fats, or 1,000 calories daily and has gained in weight.

Dr. Hendricks:

Dr. Walters' paper brings to mind a case of severe diabetes that I have been following for the past six years. The onset of the symptoms was sudden and followed an acute streptococcic tonsillitis. When first seen his glucose tolerance was but 30 grams per day. This was increased to 35 grams per day by rest, alkalization, and the cleaning up of all focal infections. At this point it remained, and no amount of dieting or starvation would increase it. This tolerance would not permit of a very liberal diet, and the most careful calculation or balancing of the various dietary components could not increase his intake to a diet yielding over 900 calories per day without a resultant appearance of sugar in the urine. Suffice to say this was not even a maintenance diet, and so the patient continued to lose weight and strength, until finally the slow starvation had so weakened him that even the ciliary muscles had not the strength to accommodate for vision, and final termination of the case seemed not far off.

At this time insulin was introduced, and the patient was placed on a daily dosage of ten units. He was a man of intelligence and he soon learned to interpret his own symptoms and look out for hypoglycaemia. From time to time he increased his insulin dosage, and made his diet more liberal, with a resultant return of strength and gain of weight. I last heard from him about two months ago, when he reported to me that he

was taking 75 units each day, that he had gained over thirty pounds in weight, and was able to do a full day's work without undue tiring. He eats a normal diet and does not stint himself on carbohydrates. Under the old starvation treatment, his outlook was hopeless. Now after six years he can look forward to a long span of useful and happy years, for he is a normal man save for his lessened insulin secretion.

Dr. Walters is to be thanked for this timely paper which brings to us so forcibly the idea of adequate feeding of diabetics. In reality, all that was accomplished by starving a diabetic was his early death. In hypothyroidism, we administer thyroid extract in such quantities as will completely counteract our patients' thyroid deficiency; in diabetes, let us follow the same plan, and administer insulin in sufficient dosage to allow our patients to live a normal dietary life.

THE SIGNIFICANCE OF RECURRENT VOMITING OR THE SO-CALLED "BILIOUS ATTACKS" IN CHILDREN.*

GEORGE L. COOK, M.D.,
Tampa.

The term "bilious attack" belongs rather to popular than scientific phraseology, nevertheless this significant statement on the part of many mothers deserves more than a hidden smile. Indeed it is a complaint which should always call for a very careful consideration, granting that it is often a passing digestive disturbance. On the other hand, it will often later lead to watchful waiting for the fatal end, following anxious days of active treatment without any apparent results. It is a vague term with a misleading sound of innocence, which may have a tendency to inspire an altogether unjustified feeling of security.

Vomiting of this type has symptoms so unusual in character, that it is often looked upon and treated as an independent disease. From observation and study of the peculiar symptoms of this type of vomiting, we have concluded that they are very little understood. Many theories have been advanced in explanation of the pathogenesis of recurrent vomiting. Many writers maintain that the affection is a manifes-

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tation of a "uric acid diathesis," others associate recurrent vomiting with acetoneuria and designate it as "acetonemic vomiting" on the ground that acetone is so constantly found in the urine. There is no evidence, however, as some of the same writers admit, that acetonemia produces the attack. Since acetone is seen in so many other affections, the condition has been pointed out as a true acidosis. The occasional occurrence of jaundice, has lead others to believe the liver is at fault. It seems a fit conclusion that recurrent vomiting is due to a toxemia, derived from absorption of toxic products, accumulated high up in the intestinal tract with an accompanying liver insufficiency.

As the liver seemingly plays an important role in recurrent vomiting, let us consider briefly its functions. Investigators find the clinical study of the activities of the liver a difficult problem, for it is an organ with manifold functions, and detailed knowledge of some of its normal physiological activities is extremely inadequate. The liver through the portal vein collects the blood from the abdominal viscera and naturally must contain substances not found in the general circulation. We have known since the time of Claud Berbard, the importance of the liver in relation to the storing of glycogen, its metabolism, and redistributing the carbohydrate again into the general circulation. The liver is known to be the seat of much of the intermediary nitrogen metabolism in the body. The liver is largely concerned with the formation and excretion of bile. Widal has suggested that the liver removes and destroys toxic products of cleavage of the proteins which are present in the portal blood. In the presence of liver insufficiency these products enter the general circulation. Many dyes, when injected intravenously, are excreted wholly or in part by the liver, methylene blue and mercurochrome are examples. We also have fairly conclusive experimental evidence that fibrinogen is produced in the liver, or under direct influence of the liver, therefore, having a direct influence upon the coagulation of the blood. The liver, it is thought desaturates fats.

At this point I wish to call your attention to a case, the symptomatology of which to me seems characteristic. H. S., age two years six months, was said to have had frequent "*bilious attacks*" with vomiting. The first attack dated back to the first month of her second year. The attacks

had become gradually more frequent, the last ones occurring about every six or eight weeks; all attacks were similar in kind, differing only in degree. They were usually preceded by a prodromal period, lasting from twelve to twenty-four hours, marked by such manifestations as coated tongue, constipation, languidness, irritability, loss of appetite and occasionally some abdominal discomfort. The mother stated that she always experienced great difficulty in getting the child's bowels to move, the stools being light in color and of a strong odor. Vomiting then began; the first vomitus consisted of undigested food, sometimes from one or two previous meals, later mostly of mucous or finally bilious and some times brownish stained vomitus. Up until the present attack mother had not noted any blood stained vomitus. The vomiting was generally distressing with retching and occurred when anything whatever was swallowed. She stated that even a drop of water would "come back." There was very little history of the temperature being elevated, she had never taken temperature but thought that only once or twice had the temperature been very high. The thirst was marked, the abdomen "sunken in," the heart usually beat rapidly. Before the child recovered she always became very weak and lost a considerable amount of flesh. The attacks usually lasted from two to three days. The mother with few exceptions had acted both as doctor and nurse. The attacks were just a "bilious spell" and she had learned from experience just what to do, to cure them. For the present illness the doctor was called, because of six days of intermittent uncontrollable vomiting. The only thing that hastened the mother to call for help, was the vomiting of blood stained vomitus. With this exception, she did not appear much alarmed, but did express surprise that she had not been able to control the vomiting as quickly as she had during previous attacks.

On physical examination the child was found to be extremely prostrated, emaciated, eyes sunken and deeply circled, eye grounds negative, the sclera showed only a slightly yellowish tinge, mouth and tongue dry, breath strongly acetone. Tonsils were hypertrophied nodular and on light pressure exuded small amount of caseous material. The skin was pale, dry, but showed no evidence of jaundice. The thirst was distress-

ing. The heart rapid, pulse weak, abdomen scaphoid. The liver was palpable two and one-half inches below the costal margin. There was no abdominal tenderness, nor were there any masses felt, the spleen was not enlarged. The peristaltic movements of the intestines were entirely absent, and only heard slightly following prolonged massage. The reflexes were normal. There was no rigidity of neck. Mother had not been able to get a satisfactory movement of bowels although had given calomel and oil in repeated doses. This she thought strange, as before such treatment had brought distinct improvement. The urine showed a total acidity 210, four plus acetone, two plus diacetic acid with 1 plus indican. No albumin, no sugar, no bile, the microscopic examination was negative, except for a few uric acid crystals. The white blood count was 10,000 with 65 per cent polys. The spinal fluid was negative. During the following six days there was intermittent vomiting with 14 convulsions, more or less severe in nature. All purgation and irrigation failed to produce satisfactory evacuations of the bowels. The slight stools were very offensive and of a trashy appearance. The total acidity was reduced to 10, the acetone and diacetic acid disappeared from the urine, but a secondary nephritis became quite in evidence.

During the entire course of the disease there was no evidence of bile in the movements. The liver increased in size. Despite all efforts, there was very little indications of peristaltic movements of the intestines at any time. Thirty-six hours preceding death there was some abdominal distension. Death in these cases is always preceded by stoppage of peristalsis. At first, the intestine became paretic from toxemia, then paralysis sets in. Life is incompatible with intestinal paresis.

Owing to these significant factors, there must be some very close association between the peristaltic waves of the upper intestinal tract and liver activity. The higher in the intestinal canal the supposed toxemia occurs, the more rapid the fatal end, as the absorbability of the intestinal tract begins at the stomach and gradually decreases throughout, being least marked in the rectum. When there is an accumulation of toxic materials, in the small intestines, where the absorbability is greatest, there is naturally thrown into the liver, through the portal vein,

large quantities of toxic materials which necessarily have their influence upon liver activity. Excretions begin to diminish. And as bile has a most stimulating effect upon intestinal peristalsis, therefore, simultaneously with decreased secretions, the peristaltic waves begin to diminish, with this liver insufficiency. Decided metabolic changes take place within the liver and body tissues, which prove to be profoundly toxic in nature, and if not corrected in the beginning will cause death.

A high degree of acidity or an acidosis is almost a constant companion of the recurrent vomiter. The cited case well illustrates this point, also reminds us of the fact that overcoming the acidosis does not always cure the patient. The high degree of acidity, the acetone, and the diacetic acid, disappeared from the urine.

The term acidosis designates a condition in which the acid substances are present in the blood in a quantity relatively so increased that the normal excess of alkali is diminished. Experimental acidosis can be produced in animals by the use of hydrochloric acid. In man acidosis depends upon the relative excess of acid produced in the body. These excess acids in most cases are represented by the acetone bodies and consist of beta-oxybutyric acid, aceto-acetic acid and acetone. The relative excess of acids in the blood may be due to an overproduction of acid bodies, a failure of the lungs and kidneys to excrete them in sufficient amounts or to a loss of bases, i. e., a depletion of the alkali reserve of the body. This phenomena is found more or less prevalent in the recurrent vomiter. Acetone bodies are present in small amounts normally in the blood and at once become markedly increased in starvation. They are still more increased in recurrent vomiting, because in these cases you are dealing both with starvation and a toxic process which also has a decided tendency to increase acetone bodies.

I think it is well to mention here that an acetonuria, i. e., heavy acetone in the urine may exist without any symptoms of acidosis. Acetonuria designates merely the presence of acetone bodies in the urine. Acidosis is characterized by a relative decrease in the alkalinity of the blood independent of the amount of acetone bodies which are being excreted.

It is certainly true that children are especially prone to the development of acidosis; is it be-

cause of the small reserve of alkali they possess, or is it due to a peculiar aptitude with which their organs produce the acetone bodies?

Assuming that the vomiting is precipitated by absorption of toxic products accumulated high up in the intestinal tract, with an accompanying liver insufficiency, we must consider briefly the etiological factors concerning themselves in this phenomena, for certainly it must be some pathological process with its accompanying toxemia hampering the normal physiological activities of these organs, otherwise we would not have the metabolic changes taking place as previously related.

Recurrent vomiting is only nature's warning to look for real trouble. It is a warning that something has gone wrong in some part of the body. The trouble may not be in the stomach at all, it may be in the intestinal tract, and often is (chronic intestinal indigestion) the kidneys, gall bladder, pancreas, the appendix. Some focal infection is often found as diseased tonsils, abscessed teeth, or it may be the nervous system, or heart, or it may be that faulty habit of eating an unbalanced diet. It may be caused from emotional disturbances bringing about disordered bodily conditions which are masqueraded as indigestion.

In the care and treatment of the so-called bilious attacks or recurrent vomiting a few differential points should be borne in mind. There is a disease, namely appendicitis, that I mention first because it is dangerous if unrecognized. Recurrent vomiting patients seldom have any abdominal signs. We are all familiar with the symptoms of appendicitis. I would advise a most careful examination of the abdomen always. Acute indigestion—this form of vomiting is often termed by parents "bilious attacks." A careful history will usually show a gross error in diet. Meningitis often comes disguised as an innocent stomach attack.

In closing allow me to impress upon you the careful sifting of the recurrent vomiter, for it is nature's warning to look out for the real trouble. What folly it is to try to soothe a symptom and leave the cause untouched.

DISCUSSION.

Dr. F. Clifton Moor, Tallahassee:

I think this paper deserves some real serious consideration. In the first place, we ought to

make a very definite definition or differentiation in this type of vomiting to distinguish it from all other cases. A good many authors discuss this recurrent vomiting under the terms of cyclic vomiting, the typical attacks recurring with more or less definite periodicity. This symptom complex undoubtedly occurs very early in life. Most cases seen begin during early infancy and tend to improve with age. Most of them in my own experience are from six months to eight years. During that time, they appear every four to eight weeks. I think the general opinion is that there is definite evidence of acidosis. It seems there is some metabolic fault which interferes with the proper handling of fats. With this definition of cyclic vomiting, the question of treatment resolves itself into two phases. First, during the attack, the one principal is the administration of fluid and glucose. Of course, oral feeding is useless, so it means fluid and glucose per rectum, under the skin intravenously, intraperitoneally, any way to get it in, because the outcome of the case depends on the success in preventing dehydration and keeping the glucose high.

Recently some of the authors have found that cases that did not respond to glucose and fluid alone were quickly relieved by glucose plus insulin, which carries out the idea that they are probably definitely ketogenic origin.

Second, during the interval between attacks the cases should be kept on a diet very low in fats. My own practice is to eliminate all butter, mayonnaise, etc., and to order a diet of skimmed milk, cereals, green vegetables and fruit.

Dr. L. L. Whiddon, Fort Pierce:

Under the cloak of discussion, I want to make three or four statements. I don't think there was a paper read here in the whole period of the assembly that is more valuable than this, and it was certainly brought out in a good way. I sat on pins, though, afraid he would make some statements I would have to cross him on, but he didn't. I want to make these three statements in regard to biliousness, acute indigestion, liver medicine, etc. Gentlemen, get those three things out of your vocabulary, for there are absolutely no such things on the face of the

earth. That is, the way we generally mean it. Of course, you are bilious when you have jaundice, because you have pathological bile in your system, but that is the only time. A mother will say her child is bilious, and the doctors are to blame for it. They are the ones who start this mess. They cause these people to say this and to say acute indigestion and liver medicine, "dynamiting" the liver, etc. If you will read some of Joslin's and Balch's works, and other men who stand out above most of us in America, you will find out that they have absolutely proved there is no such medicine as a medicine acting upon the liver. Joslin, from several hundred experiments, proved only one substance to act upon the liver, and that was oxgall and then he wasn't sure that it wasn't the introduction of the oxgall that caused the increase of bile collected instead of the increased action of the liver.

Dr. George L. Cook, Tampa, closing:

I was very much impressed with many points brought out in the discussions. In discussing a subject of this kind, you cannot cover the entire field. Recurrent vomiting, as I tried to impress, is a symptom, not a disease. I have been observing with particular interest these cases, and I have found they are handled usually as an independent condition. Recurrent vomiting is due to some toxic process going on in the body. The liver naturally collects all the blood from the intestinal tract. It has a function to perform that is certainly very difficult unless under the best conditions. If we have a case of recurrent vomiting, we pay little attention to the attack except to try to get the child to recover from the attack. You must locate the condition in the child that is producing the attack. It may be various things. I have seen a number of these cases cured by removing the tonsils, others by having infected teeth removed, but the majority are due to a chronic intestinal indigestion that exists in a large percentage of children with recurrent vomiting attacks. Also I have found a great many are due to drinking milk. I was interested in the paper regarding that subject. I am not ready just yet to state what percentage of children should not drink milk, but there are certainly from 3 to 5 per cent in which milk is absolutely contraindicated. I am for milk, I use it, lots of it, but there are certain cases that can not tolerate milk.

GUNSHOT WOUNDS OF THE RECTUM*

L. A. PEEK, M.D.,
West Palm Beach.

Many times people are shot in the back, sometimes these wounds are low, often the projectile entering or passing through the rectum. These wounds may be overlooked and subsequent wounds, caused by the same projectile, such as wounds of the other pelvic and abdominal viscera, receive what attention is given the patient. There are also wounds, entrance points of which are from the front, the sides or from below that reach the rectum.

From my own experience I think that many wounds of the rectum are overlooked. When these wounds are not discovered and treated along proper lines the result is a fatality. Many



a person has unnecessarily perished because of undiscovered and untreated wounds of the rectum. These wounds if undrained and untreated frequently cause death. It seems that man is

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prone to think of forward things only and not recollect that there are backward parts too. So when a patient is brought to you with a gunshot wound you search diligently all through the parts of the pelvis and abdomen that can be reached by an anterior incision, you repair such wounds of various viscera that you discover, but the wound of the rectum that also happened at the same shot, because it is low and hard to find, you neither discover nor treat, and your patient dies. Only with the necropsy, if made, is the wound discovered.



Consider that any gunshot wound of entrance over any part of buttocks may wound the rectum. These wounds may sometimes be reached extraperitoneally from in front as in one of my own cases. They may also be reached from behind. After your exploratory laparotomy and such work as may be needed from the front is completed, you can close your peritoneal wound and go down from a left-sided laparotomy incision and keep outside the peritoneum and get down to where you can institute anterior drainage, and perhaps also repair the rectal wound.

Or you can follow your wound of entrance, keeping thereby outside or rather below the peritoneum, enlarging the wound of entrance as needed.

The rectum is variable in position as any part of the alimentary tract. It may descend almost straight down from the sigmoid flexure, it may be a left-handed or a right-handed rectum. It may be full or it may be empty.

Case 1. Negro man, treated at Pine Ridge Hospital in 1915. Shot in back by policeman. Wound of entrance over mid-sacrum. Laparotomy done, several punctured intestines repaired. No wound of rectum found. Patient died on tenth day. Necropsy showed a punctured rectum with gangrenous stinking tissues postperitoneal of considerable extent. This had not been found at operation.

Case 2. White man, photographs shown. Shot in back by policeman, 1915. Entrance wound as shown in photograph. Laparotomy left external rectus muscle. Four punctures of intestines found and repaired. Peritoneum stitched with a drainage. Then the peritoneum was stripped down on left side and a wound of rectum was found, repaired and drained. The man made an uninterrupted recovery.

Case 3. Seen at necropsy by me in 1918 at Bellevue Hospital, New York City, where I was at that time stationed. The patient had been shot in back and attending surgeon had repaired the intestinal wounds through an ordinary laparotomy incision anteriorly made. But he had not found the rectal wound and the patient had died from that wound.

Moral—Always look out for gunshot wounds of rectum and be prepared to treat them adequately.

REPORT OF A CASE OF PREGNANCY WITH COMPLICATIONS*

HORACE STIMSON, M. D.,
Miami.

With some hesitation, for I do not wish to cast a pall over this happy occasion, I present the following case, not so much for your edification as for the sake of your advice.

April 18, 1927, Mrs. W. P. came to my office, referred by some friendly enemy, and cheerfully

*Read before the Dade County Medical Society, Miami, May, 1927.

unfolded the following story which I shall relate in chronological order. She was born 31 years ago in Iowa and her early youth was uneventful except for measles, pneumonia at 9 years, pneumonia at 18 and appendicitis at the same time, cured by the icebag. She suffered many attacks of tonsillitis, ending with tonsillectomy at 19. Menstruation was established at 11 and until marriage was marked by severe cramps before onset, requiring a "hypo" before each period. Marrying at the age of 21, 10 years ago, she soon afterwards fell downstairs bumping the end of her spine which has since been painful on sitting. Her husband has no complaints except that he was gassed during the War—and now works on the Causeway.

With pregnancy Mrs. P's troubles really began. She has had two pregnancies resulting in two healthy children aged 5 and 6 years. Both pregnancies were complicated by abscesses of the right breast which required lancing three times. During the first pregnancy she noticed, lateral to the left breast, a tender swelling which her Iowa physician diagnosed as an accessory breast; with lactation this tissue swelled to the size of the normal breast and was very painful. With each pregnancy she had vomiting and convulsions, severe occipital headaches, and was on a strict diet (presumably nephritic). With her second pregnancy she had heart failure in addition and was propped up in bed for two months, with swelling of all the limbs. Caesarean section was contemplated a number of times but her physician managed to carry her to full term parturition. Both labors were conducted by the Twilight Sleep method, aided by a general anesthetic, in hospital. The second labor was difficult, long, "dry," complicated by placenta previa and a foot presentation. Severe cervical and vaginal lacerations resulted, requiring suture. Both pregnancies were followed by severe hemorrhoids, the second by varicosities of the left leg; these have continued to increase in size and now cause dull pain and heaviness in the leg. Since the last pregnancy the injured coccyx has been so sore that she always has to sit sideways. She was unable to nurse either infant due to the breast abscesses. Since the last child she has gained from a weight of 145 to more than 200. She takes in washings, cares for house and family, and has no bad

habits except indulgence in occasional hot toddies.

So much for her past story. Now her list of recent troubles begins. During the September, 1926, hurricane in Miami, where she has lived for the past two years, she was menstruating but the flow stopped, this being attributed to fright, drenching with cold water, etcetera. A month afterwards irregular frequent flow began and lasted several months, with gushes of blood and clots at times, a watery discharge at others. Early this year she suspected pregnancy and took whiskey and quinine. The flow continued and she went to a local physician who took her to a hospital February 18, 1927, 2½ months ago and, according to her story, scraped out the womb. She did not see him after the four days in hospital. Irregular frequent bleeding and watery discharge has continued. During the past month she has felt a quivering sensation low in the pelvis, the abdomen has enlarged, and she suspects pregnancy; there has been less bleeding in the past two weeks, but some watery discharge.

While being conducted to the examining room she stopped to tell me firmly that if pregnant she wished to "carry through" with careful supervision of pregnancy and labor; if not pregnant, she wanted a whiff of gas and the removal of the following items: the accessory breast, the loose coccyx, the left varicose veins, the womb trouble, and the tubes but not the ovaries.

With some trepidation I examined her and found an obese woman of early middle age, weighing 216 pounds; hair streaked with grey; a mass of breast tissue lying in the left pectoral region, measuring 5x5x3 inches, extending to the midaxillary line and quite distinct from the main left breast; a right chronic mastitis with three scars of old incision and drainage; heart and lungs apparently normal; blood pressure 118/75; a pregnant uterus with fetus lying in a left position and fetal movements strong; I should say she is six months pregnant. External pelvic measurements normal; no blood in vagina; varicosities of labia major; varicosities of left leg. The examination showed nothing else of note. She resisted catheterization but has promised to bring urine for examination.

Because a local physician in curettage left something in the uterus 2½ months ago, I find a six months' pregnancy on my hands, with the prospect of an exciting confinement—complicated by obesity, troublesome breasts, heart and kidney decompensation, eclampsia, varicose veins, and placenta previa.

Any suggestions from master obstetricians of Miami will be gratefully received.

PELVIC INFECTIONS.*

W. C. JONES, M.D.,
Miami.

In reviewing the literature of the past few years one is impressed with the great progress of medical science as compared with even a decade previously, too with the enthralling amount of research now under way, and the further need for study and close observation in order that the present great problems of medicine may be made simpler for future generations. This can be brought about, not alone through the aid of present day laboratory facilities but by the assistance of the general practitioner and specialist in taking complete histories, making thorough examinations, and studying the minor cases equally as the major. The skill in diagnosis is not tested so much by the major pathological condition, which usually has outstanding signs and symptoms, as by the delusive points in a persistent fever or uterine hemorrhage. The future of medicine, as brought out so well by McKenzie, depends upon the ability to correlate the beginning signs and symptoms of disease before there has been a marked destruction of the surrounding tissues, for gross pathology cannot be corrected.

In study of pelvic or gynecological disease there has arbitrarily been formed three major groups, and with few exceptions, practically all fall within these groups: namely, first, disturbed pelvic mechanics; second, tumors and growths, including ectopic pregnancy and early terminated pregnancies, and third, infections. The first two groups will not be discussed in this paper, as the last requires quite extensive discussion to be fully covered more so than time permits.

The literature is loaded with treatises on upper abdominal surgery, but comparatively very few have written concerning the pelvic diseases. Surgery of the pelvis has undoubtedly been abused and perhaps by no one instrument more than by the curette. Many a case of parametritis and fatal peritonitis has been brought on by the use of a curette and thus producing a wound infection. If any one tissue in the body acts as a guard and shield against infection it is the endometrium and why abuse nature and break down its defense in the face of eminent danger? The more delicate the tissue, the more frequent the infection and consequently the commonness of urethritis and the frequency of vulvitis and vaginitis in children.

A general consideration concerning the mechanism or causes of pelvic infection are: First, a direct canal extending from the vulva to the peritoneum; second, implantation of bacteria as gonococcus or through breaks in line of defense during labor or abortion and especially those brought on criminally; and third, the persisting latent infection in the deep cervical glands which becomes active as the result of opening up fresh channels for infection. These diseases are all the result of invading organisms and until the last few years the gonococcus was the most frequently active; however, in many localities the streptococcus is now running it a close second. The increased stress of living, the high cost of having babies, and often sexual immorality seem to account for the rapid increase of the latter. The illegal operation is usually performed by the illegal professionalist under adverse conditions or some person who introduces foreign bodies and creates an ideal field in the bloody mess for bacterial growth. In the obstetrical field through prenatal clinics, improved aseptic technique, and better facilities the puerperal sepsis has been markedly reduced. The frequency of infections due to abortions brought about by the irregular medical man or other means is used by advocates of birth control as a strong point in their favor. Other organisms which less frequently cause trouble are staphylococcus, pneumococcus and colon and tubercle bacilli. The infection by the colon bacillus is usually secondary to appendicitis or diverticulitis. The tubercle bacillus is not an infrequent cause but is rarely primary in the adnexa.

*Read before the Dade County Medical Society, May 6, 1927.

As a result of the above infections the condition may be local or general with a fortunate predominance of the former. The local condition may have varying constitutional symptoms with no blood infection, while the general condition often shows little or no local reaction but too often ends fatally with generalized peritonitis, or pyemia and its resulting multiple foci. The general effects will not be dealt with further in this paper.

The local reaction depends greatly upon the type of organism and the mode of introduction. The streptococcus which is usually introduced through a break in the birth canal is most likely to produce cellulitis or pelvic peritonitis. The gonococcus tends to produce urethritis, Bartholinitis, salpingitis, tubo-ovarian abscess, and often pelvic peritonitis. The colon bacillus may involve any of these structures. The tubercle bacillus most frequently infects the tubes. The infections may be mixed and the lesions multiple and complex. Although pelvic infection is very common, still no place in the body so readily localizes it as does the pelvis and undoubtedly its structure plays a great part in this function. It already has a floor and sides which are more or less fixed and only needs a roof to be completely shut off from the rest of the abdominal cavity. The tubes and ovaries have resistant walls and the pelvic ligaments, especially the broad, divide the cavity into sections.

Cellulitis usually involves the broad and sacro-uterine ligaments of one side but may be bilateral. Tubo-ovarian abscess is most often unilateral and associated with some local peritonitis. Salpingitis is commonly bilateral and the tubes may be converted into sacs or adhere to the ovaries to form a tubo-ovarian abscess and the pelvic peritoneum may be involved. In case of ascension of an infection from the genital tract after passing through the endometrium, the first line of defense, the highly convoluted mucous membrane of the tubes become rapidly congested and act as a block, while from contraction of the musculature the fimbriated extremities fold in and seal off or stick to some adjacent structure, usually the ovary. If, however, some of the infecting material seeps through into the pelvic cavity, it is low and soon nature covers over by agglutinating all available structures in layers to rapidly imprison the organisms, which causes the organisms to diminish their activity and re-

duces their virulence. In time they perish and meanwhile the patient is undergoing a process of self-immunization. The length of time necessary for this to take place varies with each case and is dependent upon the factors involved in the outcome of any infection, namely, virulence of the organism, resistance of the patient, and care and treatment used. Resolution gradually takes place but most often permanent damage has been done and acute exacerbations recur following the slightest indiscretion or activity.

The onset of the infection is accompanied by pain, and frequently discharge and urinary symptoms. Pain is caused by the inflammatory congestion, discharge to the infection of the mucosa of the tract, and the urinary symptoms to urethral or perivesicular congestion and pressure. Nausea and vomiting may accompany it; temperature is elevated; and the lower abdomen is tender and rigid. For the first few days the above symptoms may increase in severity, but as localization occurs, the patient becomes more comfortable, and the temperature lowers with morning remissions. Convalescence is slow and may be accompanied by bad days. Leucocytosis is usually quite marked. The acute exacerbations most frequently occur at time of the menses and the menstrual cycle may be more frequent and profuse. If the condition does not tend to localize readily, constitutional symptoms are more severe with marked variation in pulse and temperature, chills, high leucocytes. There is most likely early suppuration which may need assistance.

The diagnosis of pelvic infection depends primarily upon a well-taken history and this will help find a post-abortive or puerperal starting point and also give evidence in the gonorrheal type of a discharge, urinary irritability or undue frequency in voiding urine. The symptoms accompanying the onset are very important and the examination is confirmatory. This examination should include a thorough investigation of the abdomen for any points of tenderness, masses, and any evidence of rigidity; the palpation of the abdomen should start over an unsuspected area for which the left upper quadrant is usually most suitable, and gradually work to the fields of tenderness and underlying pathology. The vaginal examination should begin with a stripping of the urethra, palpation

of Bartholin's glands and observation of vaginal walls and cervix. If any discharge is present, several smears should be made for microscopic examination—they being taken from urethra and cervix unless otherwise indicated. The bimanual examination should be made carefully and with extreme gentleness in order not to damage those cases where complete localization has not taken place. Occasionally anaesthesia may be necessary in order to successfully complete the diagnosis. A cellulitis produces a firm, fixed, immovable mass extending laterally from the uterus to the pelvic wall and quite inseparable from the walls. On the uterine side its upper limit does not go above the fundus, while further laterally it may produce a definite rounded mass above Poupart's ligament. The sacro-uterine ligament on the side involved is usually quite hard and thick. When the infection is unilateral the uterus is pushed to the opposite side, which may present quite a normal fornix. The uterus is quite firmly fixed but its size, shape and consistency are quite normal. This type of infection usually terminates without suppuration and may have no disabling effects. An ovarian abscess presents a definite rounded, elastic mass between uterus and pelvic wall with a definite sulcus intervening. Salpingitis presents masses in the lateral fornices, one or both of which may be in the sacro-uterine pouch. These masses are usually firm, fixed, and irregular. The lateral movement of the uterus is limited, although it may move freely in the antero-posterior plane. The tuberculous salpingitis gives quite similar findings, but onset is more insidious and other tuberculous lesions are found in the body. This diagnosis may be more definite if self-immunization does not take place in six to eight weeks. In pelvic peritonitis the whole pelvis is more or less filled by a general inflammatory mass—the cervix is closer to the vaginal orifice; the fornices are filled and especially the posterior one which may show a definite bulging, fluctuant mass; and the uterus is not easily defined, being a part of the general mass formation. Absence of blood-infection, frequent chills with profuse perspiration, high temperature with marked fluctuations even to sub-normal, and tenderness over the course of the ovarian veins strongly suggest pyelophlebitis.

Differential diagnosis is most important in the case of appendicitis. History is important;

the onset is more acute; nausea and vomiting more frequent; the pain is usually higher at first in the epigastrium and then lower in the right side with tenderness and rigidity over the appendix. Eliminating the association of this pain with recent labor or abortion or coincident menstrual period and determining the maximum tenderness to be over the appendix, the diagnosis of acute appendicitis is usually assured. A pelvic examination in any case of doubt is certainly not amiss. In cases of ectopic pregnancy the history and pelvic findings are usually quite definite. The recto-vaginal septum is not indurated as in case of inflammatory condition. Twisting of an ovarian cyst is not likely to be confused and an infection of a cyst is very uncommon. Fibroids are usually quite definite but differentiation from an old tubo-ovarian abscess closely adherent to the uterine wall may be quite difficult without a good history. In case of an infected or degenerating fibroid, in addition to the pelvic infection, there is usually a definite tumor and hemorrhage of marked degree.

Early treatment and management of pelvic infections should be conservative and non-surgical. Symptoms should be relieved and supportive measures followed. The patient should be put to bed and told to stay there for an indefinite period. This point usually governs the future course of the disease and financial condition of the patient becomes a great factor as to whether or not she can have proper attention. Even if she can be properly rested and cared for, she should be told of the process of self-immunization through which she must go and of the likelihood of good and bad days during this process. The local application of heat tends to relieve some of the pain and together with small enemas assist in keeping down distention. Hot copious douches of a mildly antiseptic solution except during the immediate onset assist in alleviating the pain. Morphia in small doses may be given hypodermically once or twice. For severe vomiting which is unusual, lavage may be used. The diet at first should be limited to plain fluids and gradually increased. After definite mass formation the diet may include the lighter foods and mild laxatives may replace the enemas. Every acute pelvic infection should be permitted to go through this period of self-immunization and convalescence. If her

status in society demands that she be returned as soon as possible to her household duties, or if the process is a menace to her future health, radical surgical procedure should be undertaken. Without operation, an early return to duties, lack of proper care, exposure to cold, dampness or fatigue may soon result in an acute exacerbation. In any case that has gone through the self-immunizing period and then follows with one or more acute exacerbations, there is proper reason for radical surgery. However this surgery should preferably be done, if circumstances permit, after at least two weeks of normal temperature. At this period the least destructive surgery is possible and even if small pockets of purulent material, which is usually sterile, escape during the removal of the pelvic masses, it may be carefully sponged away and an operative field free from hemorrhage and foreign products may be closed primarily without drainage. During my past hospital service, I operated twenty-three cases of chronic salpingitis, twelve of which showed purulent material during the operation. These fields were carefully freed from hemorrhage and all cases closed without drainage. The post-operative course in these cases was not atypical to the clean cases and all healed primarily with no evidence of local masses at end of two weeks' post-operative.

In the abdominal operative work it is well to be conservative but at the same time radical enough to eliminate all possible chance of future ill-health from pelvic trouble. Up to the age of thirty-five or even forty, if possible, both ovaries should be preserved as well as a healthy uterus, in order that normal menstruation may continue. If both ovaries are destroyed, it is a good practice to remove the uterus as well and either cauterize or cone out the cervix to eliminate future discharge. There are various aids to treatment such as vaccines, foreign proteins, dyes, and other agents, the merits of which will not be discussed in this paper.

If in treatment of pelvic infections nature's plan of defense and overthrow of enemy organisms are recognized and the course governed by same, the present mortality rate of many surgeons and hospitals will be remarkably lowered, for after all is said and done, the sooner nature is heralded as the best doctor and is assisted in her plans and methods, the sooner will humanity benefit and the physician's reputation augment.

MULTILOCULAR CYST OF OVARY IN THE INGUINAL CANAL—CASE REPORT*

S. E. CHAMBERS, M.D.,
Miami.

Mrs. H. H., a white woman, 22 years of age, presented herself with the complaint of a mass in the left inguinal region of two years' duration, but enlarged markedly in the past six months.

The family and past history is essentially negative with the exception of a tuberculous disease of the left hip ten years previously which was operated upon by Dr. Albee with partial ankylosis and an apparent cure of the joint condition.

On physical examination the patient is slightly underdeveloped, but fairly well nourished. Both apices of the lungs reveal evidence of fibrosis but no rales. The left hip is partially ankylosed. In the left inguinal region there is a mass of about 8 cm. in diameter, firm, not fluctuating, skin over the mass freely movable. On coughing there is no impulse transmitted to the finger. It was my impression that I was dealing with either a sliding inguinal hernia which had become incarcerated, or a lipoma, the latter being of not uncommon occurrence in this region. On palpation I could make out a mass in the left iliac region. Its relation to the uterus could not be made out.

On opening the inguinal canal under one per cent novocain anesthesia, I came across a mass with thick walls corresponding to the mass that could be felt on the outside. The incision extended from the anterior-superior spine of the ilium to the symphysis, but the mass could not be delivered through the incision. Therefore, we divided the oblique muscles of the abdomen transversely after suturing the muscles to the fascia. The mass was delivered through the incision and was connected by a narrow neck which extended through the canal with a mass inside the peritoneal cavity about four times the size of the mass outside. The large portion of the tumor was anchored by a pedicle, rather short, and traceable down to the left ovary. We were dealing with an ovarian tumor which had herniated through the inguinal canal. There was no evidence of strangulation or twisting of

*Read before the Dade County Medical Society, August 6, 1927.

its pedicle. The tumor was multilocular and filled with straw-colored fluid.

The pedicle was ligated and the tumor was removed en masse. The wound was closed in the usual manner after the repair of the inguinal opening. The patient had an uneventful recovery and was discharged cured 15 days after the operation.

This case is here reported because of its comparative rarity, only two cases being reported in literature, and the importance of bearing this condition in mind in tumors in the inguinal region. Also, danger of strangulation by the twisting of the pedicle is a possibility, which will require immediate surgical intervention.

PNEUMOTHORAX IN A NEWBORN INFANT—CASE REPORT*

M. JAY FLIPSE, M.D.,
Miami.

The occurrence of pneumothorax during infancy is very unusual. Text books on pediatrics are either silent in regard to this condition or only mention its rarity. Considerable theoretical discussion is found on the physiology of respiration in infants, all of which indicates that there is at best only a very small negative pressure in the pleural cavity of the newborn.

Abt states that the lung of the newborn does not collapse if the thorax is opened, and that the negative pressure in the lungs during inspiration is probably not more than 5 mm. below atmospheric pressure. A search through the available current literature fails to reveal any reports on spontaneous pneumothorax in infancy, although the condition is by no means uncommon in adults.

Cozzolino in a search of the literature up to 1906 found forty-one cases of pneumothorax in children. Forty per cent of these were tuberculous. I have not been able to obtain his original article as yet and do not know the youngest child in his series.

Cattelan describes a case in a child of three years who developed bilateral pneumothorax as a complication during measles and pertussis.

To these cases we wish to add our own report. There is no question as to the diagnosis in our case, although the etiology is obscure. An excellent series of X-ray films was obtained by Doctor Raap, indicating the progress of the infant under treatment.

Mrs. G. O., age 22, white female, was delivered of an eight-pound female infant about 5:30 a. m. September 22, 1927, by Doctor M. D. Wilson. Labor had been induced by means of a Brown bag and the child was delivered with the application of low forceps. The infant was normally formed, robust and of good color on delivery. The fetal heart rate had been in the neighborhood of 130, before and during labor, and was approximately of the same rate immediately after birth. As soon as the child was delivered it made a vigorous attempt to breathe, but little or no air entered the lungs, the lower costal margin being deeply retracted during the inspiratory effort. The cord was ligated and severed, and ordinary measures of inducing respiration were used, such as spanking the child and gently compressing the thorax with one hand. When respiration failed to begin with these measures, a small tracheal catheter was passed. The compression of the chest was then continued, and air could be heard passing through the catheter. The infant also received a small dose of Alpha Lobelin hypodermatically. Within a few minutes respiration had begun and the moderate degree of cyanosis which had developed cleared.

Respiratory movements at this time appeared of an unusual type. Expansion of the chest was unequal, being apparently limited to the left side. There was, however, a sufficient oxygenation of the lungs to warrant withdrawal of the catheter. At this time the infant cried with a rather feeble but otherwise normal voice. It was noted, however, that on slight exertion, either with crying or on movement of the limbs, the child developed cyanosis. During these periods of cyanosis oxygen was administered, which restored the normal color.

Three hours after the birth of the infant I saw the child in consultation with Doctors Wilson and Kennon. At this time the expansion of the lungs appeared to be fairly equal, but the left side of the chest was more prominent than the right. Percussion note was resonant throughout, slightly higher pitched over the left than on the right. The heart sounds were heard more clearly to the right of the sternum. Breath sounds were of normal broncho-vesicular type over the entire right chest and were practically absent on the left except along the spine posteriorly where distant tubular breathing could be heard. A tentative diagnosis of pulmonary atele-

*Read before the Dade County Medical Society, October 7, 1927.

lectasis was made and X-ray of the chest was ordered. The X-ray films showed the left side of the chest larger than the right, and the heart displaced almost completely to the right of the sternum. The left lung appeared fifty per cent collapsed and a well defined area of pneumothorax completely surrounded the left lung.

Since the child appeared to get on satisfactorily by the use of oxygen during its occasional spells of cyanosis, we deemed it advisable not to interfere with the pneumothorax until a later time. Additional X-ray films were made at twenty-four hour intervals. These showed a progressive collapse of the left lung. On the morning of the twenty-fourth, the left lung was totally collapsed, and in spite of the fact that the clinical manifestations were improved, it was considered advisable to remove some of the air from the left thorax to enable the heart to return to a more normal position. Accordingly 30 cc. of air was permitted to escape by puncturing in the mid-axillary region with a $\frac{3}{4}$ -inch, twenty-five gauge hypodermic needle connected to a twenty cc. luer syringe by a short length of rubber tube.

The infant showed no reaction from the aspiration of air, and films made immediately after this procedure gave evidence of some expansion of the left lung. The heart was also several cm. nearer its normal position, although the cardiac shadow was still displaced considerably to the right. There still remained a considerable area of pneumothorax on the left side. The following morning X-ray films showed the left thorax smaller than had previously been noted. The diminution in size, however, was at a sacrifice of lung expansion. The left lung had collapsed to nearly its former state; the amount of air in the left thorax was obviously decreased. Eighteen cc. of air was withdrawn from the left chest without suction, the air being forced out while the child was crying.

The nurse reported that the infant had shown a single attack of severe cyanosis and choking during the preceding two hours. Shortly after the second aspiration of air, the child regurgitated a small amount of breast milk. Immediately a very pronounced stridor developed and the child presented symptoms of obstruction of the glottis. These symptoms were relieved by inverting the infant and administering oxygen inhalations. For at least ten minutes after the obstructive symptoms were manifest, there was a marked stridor associated with retraction of

the thorax and slight cyanosis. It was our impression that these symptoms were due to obstruction of the glottis, either by spasm or by collapse of the epiglottis.

The following day X-ray films showed the left lung in apposition with the chest wall except for a very small portion along the lower border. The heart at this time was in a practically normal position and the general condition of the infant satisfactory.

Before discharging the infant from observation, consultation was obtained with Doctor Hotchkiss to determine the condition of the epiglottis. On attempting to examine the throat the child vomited and developed a moderate degree of stridor, which, however, subsided without cyanosis. Doctor Hotchkiss was of the opinion that the cause of the stridor was collapse of the epiglottis. He advised that no measures be taken until observation indicated the degree of epiglottic collapse. Since that time the infant has progressed very satisfactorily, has shown no further abnormality of either the lungs or the larynx and is behaving in all respects like a normal infant.

The mechanism in the production of the pneumothorax in this case is problematic. It is our impression, however, that at birth the infant had a collapsed epiglottis which obstructed the larynx. It is altogether possible that the inspiratory efforts made at that time were sufficient to rupture an alveolus. The asymmetrical expansion of the chest when respiration had been established after the introduction of the tracheal catheter suggests that the pneumothorax was even then in the process of development.

Collapse of the epiglottis, though rare, is occasionally observed. In a number of instances it has been necessary to amputate the epiglottis to prevent asphyxiation. In this case we are probably dealing with an epiglottis with but slightly more flaccidity than normal and which will probably develop sufficient cartilage to become rigid as the child grows older.

DISCUSSION.

Dr. W. T. Hotchkiss:

This is certainly a very interesting case. I think that Dr. Wilson and Dr. Flipse are to be congratulated on the way they handled the case at the very onset. It is undoubtedly true that the prompt introduction of the tracheal catheter saved the child's life.

Something we all ought to keep in mind is the

cyanosis. These cases of achondroplasia of the epiglottis are fairly rare, but the literature does contain a good many cases. In the average case where there is practically no cartilage in the epiglottis, the epiglottis should be very promptly amputated. There is no relief otherwise. This child must have had some cartilage in the epiglottis—there was probably a thin line through the epiglottis where there was no cartilage which produced the valve-like action.

Amputation of the epiglottis does not leave any bad results whatever. The children go on just as well as though they had an epiglottis. There is no interference in swallowing, which shows the epiglottis is an organ, after all, of no particular importance, and the larynx covers the opening preventing the inspiration of foreign bodies.

There is another condition that sometimes does exist that may be confused with the loss of cartilage or collapse of the epiglottis. There were about forty cases in the literature up to 1926 of mucus retention in the epiglottis. This forms a cyst of the anterior wall of the epiglottis and produces a constant dyspnea and cyanosis until relieved by collapse of the cyst and evacuation of its contents. In most of these cases, it is not necessary to amputate the epiglottis.

Whenever we have a case of cyanosis and stridor, we probably have an epiglottis disturbance of some kind, either cyst or achondroplasia of the epiglottis.

ETHER ANAESTHESIA*

J. M. BEGGS, M.D.,
Chattahoochee.

Ether has been used as the principal anesthetic here since 1920, and in the last four years it has been administered 1,143 times, to patients from 2½ to 80 years of age, to all types of mental cases, and some few with valvular heart diseases, and practically all types of major operations and accidents, with only the following fatal results, which might have been due to the ether: One death from aspiration pneumonia, 3 days later; one death on table while doing an operation for strangulated hernia; one death shortly after completing amputation right leg at middle third femur, from an accident of log truck running over man. (About 2½ hours

elapsed from the time of the accident until he reached the hospital and he was in quite a state of shock, so do not consider this death due to ether.) One death following thyroidectomy, about 35 minutes after leaving operating table, which might have been caused from the anesthetic. Out of this series of patients we have found only one in which ether was contra-indicated, that was due to patient having marked pulmonary edema.

We use ether for the following reasons: easily obtained and transported, economical, does not require cumbersome apparatus in administration, free from accidental explosions in the ordinary operating room, and probably does not require as much skill in administering as some of the others.

Preparation.—Usual preparation the night before for operation, and half hour before going on table hypo of ⅛ to ¼ gr. morphine sulphate and atropine in proper doses. Just before going on table all false teeth removed, should patient have any, face and mouth anointed with vaseline, gauze pads over eyes and towel over head.

Administration.—We use the open drop method, with Esmarch mask covered with 4 to 8 layers of gauze, and add towel around this. In beginning, hold mask about six inches above patient's face and give gradually, also lowering mask gradually. In this way, can get the majority of patients etherized without their becoming excited, also without having the sensation of strangulation. It usually takes from 10 to 20 minutes to get a patient ready for operation, taking from 6 to 8 ounces of ether, as it is not all utilized due to evaporation. After the patient is relaxed and towel placed around mask, decrease the amount of ether and try to give just enough to keep thoroughly relaxed. Keep the patient's head inclined to one side as they breathe better, and there is not as much chance of tongue becoming troublesome by falling back and obstructing breathing. Lots of times when patient's breathing is shallow and irregular a few drops of aromatic spirits of ammonia will put him back to normal.

Shock is best treated by prevention. The surgeon can practically eliminate shock in abdominal operations by careful and gentle manipulation of the viscera, and the anesthetist by watching the patient closely for the cardinal symptoms, such as cyanosis, rapid, irregular pulse, cold clammy skin, and dilatation of the pupils. If the

*Read before the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, Chattahoochee, October 13, 1927.

shock is due to loss of blood, before or during operation, morphine by hypo and normal saline by hypodermoclysis or intravenously, is the best treatment, with the application of heat by hot water bottles. Outside of cases mentioned which were fatal, we have had only two patients to go into shock on the table—one was treated as mentioned above; in the other one, the operation was completed so the patient was put to bed. We have had few cases which went into shock following operations, which consisted of one gallbladder operation, and one pelvic operation.

In gallbladder operations it is necessary to have the patient thoroughly anesthetized; in fact, pushed near to where the pupils are partially dilated, as it is necessary to prevent shock afterwards. In other abdominal operations it is not necessary to give to the point of dilating the pupils. In pelvic operations, especially where tension has to be applied to uterus, the breathing is shallow and sometimes irregular, but as long as the patient's color is good and pulse is full and regular, and no dilatation of pupils, it should not cause any alarm to the anesthetist.

We have noted that the following are the hardest to anesthetize, and keep on what might be called even narcosis, in order named: alcoholics, drug addicts, and that type which might be described as short in stature, compact physique, and short fat neck.

TULAREMIA—CASE REPORTS

C. W. HARPER, M.D.,
Chipley.

Case 1—R. E. H., white farmer, age 45, in latter part of February, 1927, noticed three small pustules on right first finger which he opened with a knife used in dressing wild rabbits the day before. Three days later he developed a severe headache, pain in back and limbs, next had a chill, fever and sweats which continued about ten days. Two days after appearance of fever, right first finger was badly swollen but only slightly painful, the pustules had ulcerated and a thin purulent fluid could be expressed. About this time a small lump appeared on mid-forearm, a larger one on mid-arm and a mass in axilla, all very tender and painful. These glands were later incised and revealed thick creamy pus. Several small pustules appeared on chest and back. He lost twenty pounds and was unable to work for six weeks. Blood sent to Hygienic Laboratory, Washington, agglutinated *Bacterium tularensis* in dilution of 1:1280.

Case 2—Mrs. J. H., white housewife, age 46, five days after killing and tearing up wild rabbit in her garden—this done to keep other rabbits out (?)—developed headache, pain in back and limbs and some temperature and much nausea and vomiting, the latter aggravated by the thoughts of a rabbit—this before the probable connection between the rabbit and her illness was suggested. On the right thumb two scratches which had been present for some time became inflamed and ulcerated, causing but little pain. Next day, on right arm, a red streak with several lumps along its course and in axilla appeared, all tender and painful, two weeks later these glands were incised and revealed thick pus. Recovery has been slow, patient very weak and nervous with soreness and stiffness of muscles and joints of back and limbs, seven weeks after onset of symptoms. Blood sent to Hygienic Laboratory, Washington, agglutinated *Bacterium tularensis* in dilution of 1:320.

U. S. PUBLIC HEALTH SERVICE,
Washington, D. C.

March 22, 1927.

(COPY)

Dr. C. W. Harper,
Chipley, Florida.

Dear Doctor Harper:

Three serums forwarded with laboratory slips were received March 21st and were tested for agglutination of *Bacterium tularensis* with the following results:

R. E. Hood, positive, dilution.....	1:1280
Julia Hicks, " "	1:320
Lucy Everette, negative in all dilutions from	1:10 to 1:5000.

This is a remarkable group of cases and I congratulate you on the diagnosis. The serum of Lucy Everette was collected apparently on the eighth day which is on the border line of beginning agglutinin formation; if you will send this serum again it will doubtless be positive.

The diagnosis of Tularemia is like working a cross-word puzzle; the trick is to find the letters which spell R A B B I T.

Enclosed please find three questionnaires on which I would appreciate receiving the high points of the history.

We are ready at all times to test serums.

Sincerely yours,

EDWARD FRANCIS,
Surgeon.



NEW MUNROE MEMORIAL HOSPITAL, Ocala

The formal opening of the handsome new Munroe Memorial Hospital was celebrated January 6th, when hundreds of Marion County citizens paid their visit to the institution.

Nurses from the training school were stationed throughout the building acting as guides describing the equipment, and answering the numerous questions asked. The hospital seemed to have the unanimous approval of all, and numerous were the compliments passed to those responsible for the very fine equipment installed.

The hospital is a fire-proof, brick structure situated on the South Dixie highway in the center of a five-acre tract of ground with beautiful terraced lawns running to 12th street. No more ideal location could be found surrounding Ocala for a hospital. The hospital has a capacity for sixty-six patients and in an emergency could

take care of approximately ninety patients. The top floor contains the major and minor surgery, sterilizing room, delivery room, doctors' scrub and dressing rooms, X-ray and orthopedic rooms. The rest of the floor is devoted to maternity cases, baby cribs and children's ward.



Public Ward.



Eye, Ear, Nose and Throat Operating Room.

The second floor is arranged for the care of surgical cases on one end and medical cases on the other, with the male and female wards on either side of central corridor. The main floor contains the administrative offices, doctors' staff room, emergency room, reception room, nurses' dining rooms with large kitchen, which is equipped with electrical apparatus. All of the equipment in the hospital is of the very latest design and no money has been spared in procuring equipment to render the very highest service to care for the sick and the invalid.

Invitations were sent to the medical profession throughout Marion and the adjoining counties,



Sterilizing Room.

and at 4:30 p. m. some forty of our good doctor friends were escorted through the building by the superintendent, Mr. John A. Bowman, and the medical staff of the hospital, after which they met at the Marion Hotel, where they were the guests of the Staff at a banquet. Many short talks were given by the visiting doctors and some of the Board of Trustees, all expressing their



General Operating Room.

approval of the well-equipped institution. Dr. R. B. McIver, assisted by Dr. William McL. Shaw, both of Jacksonville, entertained the entire company with his very interesting discussion of lesions of the genito-urinary tract with particular reference to kidney, illustrated by lantern slides.

A DISCUSSION OF THE CAUSE OF LABOR WITH REPORT OF A CASE WHERE LABOR FAILED TO DEVELOP*

W. B. RYAN, M.D.,
Coral Gables.

At the onset of labor the intermittent contractions of the uterus which have existed throughout pregnancy, merge into, or are replaced by contractions of a painful and more forcible nature. These contractions increase in strength and severity and result in dilatation of the cervix and expulsion of the child and placenta.

The cause of this process is unknown. Many theories have been adduced by various investigators but none seem capable of universal application. Some obstetricians believe that it is a simple development of the intermittent contractions of pregnancy augmented by some slight irritation either emotional or mechanical. In support of this they cite the known readiness with which the uterus reacts to stimulation in the latter months of pregnancy and the fact that the intermittent contractions are often painful for two or three weeks before labor.

Mauriceau and many others since his time believed that labor was entirely a reaction to distention, that when the uterus was distended to a certain point it reacted as any other hollow organ and attempted to empty itself. They cite as proofs the frequent occurrence of premature labor in the presence of hydramnios or twin pregnancy. On the other hand we often find premature labor with small children and prolonged pregnancy with large ones.

Galen's explanation, which still has many adherents, was that labor is due to pressure of the presenting part on the cervix. But pressure on the cervix with varying degrees of dilatation may exist for days without labor and labor begins in transverse presentations where no presenting part is in contact with the cervix.

Keilmann and Knüpfner brought forward the theory that labor was due to the formation of the lower uterine segment causing pressure on the surrounding nervous ganglia. Labor may begin with a rigid cervix before the lower uterine segment is formed.

Naegele, Simpson, Scanzoni and others believed that in the latter weeks of pregnancy the decidua underwent a fatty degeneration causing

*Read before Dade County Med. Soc., Aug. 6, 1927.

a partial separation of the ovum. The ovum then acted as a foreign body and the uterus contracted to expel it. Later investigations have shown that this change is not normal and does not occur in the great majority of pregnancies. The septa become thinner but are not torn through till the expulsion of the foetus.

Geyle and others believed that labor was a race habit of great antiquity. That nature after ages of experimentation in the dawn of man's existence found that two hundred and eighty days was the most favorable time for both mother and child. Longer pregnancies resulted in large children with difficult labors and lacerations while shorter pregnancies brought forth puny babies with a high death rate. This theory, however, will not legally account for the birth of children in Tennessee.

Undue exercise or exertion, jars, violence, strong emotion, grief or anger may and often do induce labor. These causes are not the usual or normal manner of terminating pregnancy and we do not know the exact mechanism by which they work.

Eden and Williams believed that labor might be due to senility of the placenta as evidenced by infarct formation. They thought that due to this senility the foetus may lack nutrition and this lack of nutrition give rise to metabolic waste products which enter the maternal circulation and stimulate the uterus to contract. Many placentae however show no infarcts, chalk, cysts, cicatrices or other evidence of senility.

Brown, Sequard and later Keiffer demonstrated that an excess of carbon dioxide in the blood would cause uterine contractions, but no one has proved the presence of an excess of carbon dioxide in the blood during or before labor. Williams showed that during labor the output of carbon dioxide is lowered. The great muscular exertion should produce an increase so there must be some bodily change that depresses the oxidative processes.

The investigations of Slemons showed marked changes in metabolism a few hours before labor. There was a profuse diuresis with lowered nitrogen output. This is opposite to the usual condition during the greater part of pregnancy. These changes were not present in cases of induced labor.

Mende, Tyler-Smith, Löwenhardt, Beard and others support the ovarian hormone theory. They believe that during pregnancy a hormone

is formed by the ovary or the corpus luteum. This hormone is most plentiful at the time when the menses would be due and accounts for the increased tendency of the uterus to contract at those times. At the tenth menstrual cycle this hormone reaches its height and causes labor.

Von de Heide in his experiments found that the intravenous injection of foetal serum into pregnant women would in some cases cause labor. He argued from this that labor was an anaphylactic reaction. That foetal substances gained entry into the maternal circulation and caused the formation of antibodies. As term approached the foetal antigen became excessive and the reaction of antigen and antibodies set free substances that stimulated the uterine ganglia and produced labor.

Spiegelberg advocated a theory of foetal causation similar to that of Eden and Williams except for the factor of placental senility. He believed that the foetus reached a stage of development at which the placental circulation no longer furnished the full amount of materials needed for growth and further development. This malnutrition of the foetus resulted in foetal excreta entering the maternal circulation and caused labor.

Kieffer and others worked out the nerve supply of the uterus and proved it to be of three-fold origin. Part is derived from the lumbar cord, part from the sympathetic and part from the intrinsic ganglia and nerves of the uterine muscle. Kruieger and Offergeld in their animal experiments cut the pregnant uterus free from all connection with the central and the sympathetic nervous system and found that labor set in at the usual time and progressed in a normal manner. This proved that labor is not dependent on any center in the central nervous system and they argued that it must be due to stimulation of the intrinsic uterine ganglia by unknown substance in the circulation.

Sauerbruck and Heyde, whose work was afterwards confirmed by Williams, united female rats in such a manner that they were living in symbiosis. If both rats were pregnant labor in one caused labor in the other. If only one rat were pregnant the onset of labor caused serious illness of the other. This would prove that labor is due to some substance circulating in the blood which is harmless to pregnant animals but poisonous to the non-pregnant. The nature of this substance and whether it is of maternal, foetal or placental origin is unknown.

There is probably a second factor which acts independently or in conjunction with this substance and is concerned in labor induced by emotional or mechanical irritation.

I wish to report a case in which for three successive pregnancies labor failed to set in at term.

Mrs. S. W. V., seen June 12, 1926, white, American of German ancestry, age twenty-seven; height five feet five inches; weight one hundred and forty-two pounds.

Last menstruation December 2, 1925; probable date of confinement September 15, 1926.

Family history negative. Personal history: Usual diseases of childhood. Thyroid gland began to enlarge at age of thirteen. Menstruated at fourteen. Thyroid continued to enlarge and at seventeen began to exhibit toxic symptoms but improved under X-ray therapy. She had influenza in 1918.

First pregnancy in 1921. Pregnancy progressed normally but labor did not occur at the expected time. Her physician thought that she had miscounted and allowed her to go another month. Still labor did not occur and the pressure symptoms becoming distressing he endeavored to induce labor with quinine and castor oil. He tried pituitrin. He inserted a bougie and packed the cervix and vagina with gauze. This failing he waited two weeks more and then removed her to a hospital and inserted a series of Voorhees bags. These failed to produce pains so he dilated the cervix manually, applied high forceps and delivered a large child with head marked by forceps. Child lived a few minutes.

Second pregnancy in 1923 with a different physician. Again she was allowed to go a month over term. Again castor oil, quinine, pituitrin, bougies, and bags were tried without success. She was delivered by manual dilatation and podalic version. This child lived.

Physical examination: Well nourished and developed; moderate enlargement of thyroid; slight exophthalmos-Bruit over thyroid; heart slightly irregular, no enlargement or murmurs; pulse 88; blood pressure 122-74.

Uterine fundus one and one-half inches above umbilicus; foetal heart not heard; foetal position not determined; pelvic measurements normal; vaginal outlet relaxed; old stellate laceration of cervix.

Pregnancy progressed normally; urine and blood pressure normal; pulse continued rapid and slightly irregular.

In August I discovered that she had a twin pregnancy. She passed the expected date of confinement but due to the damaging of her residence by the hurricane and the crowded conditions of the hospital I waited until the house could be repaired and the lights turned on again.

By October first she had had no pains and was greatly distended and very uncomfortable. Her legs were swollen and painful due to pressure on the vessels and nerves. On examination I found the cervix obliterated and two fingers dilated. The foetal head was engaged. I gave her two ounces of castor oil and followed it with four ergo apiol capsules and five grains of quinine every hour for six doses. No pains resulted.

The same dosage was repeated on October 2nd with the same result.

On October third I inserted two silk catheters between the membranes and the uterine wall and packed the cervix and vagina with gauze.

On October fourth, with catheters and packing still in position, I gave ergo apiol, quinine and pituitary extract every hour for six doses, starting with three minims of pituitary extract and increasing two minims each dose. I continued this on October fifth, using 1 c.c. of pituitary extract at a dose. I tried three different makes of pituitary extract—I never succeeded in producing a single pain but several times I was almost sure that I could feel a slight contraction of the uterus.

The patient and myself both rested on October sixth and the following day under general anesthesia I dilated the cervix by hand, ruptured the membranes, applied forceps and delivered a male child weighing six and one-half pounds. I then ruptured a second sac and delivered a female child, five and three-quarter pounds in weight, by pressure on the fundus. The placenta was expressed manually and the uterus contracted down firm and hard. The puerperium was normal and mother and children continue in good health.

I am unable to form any definite opinion as to the cause of her failure to go into labor but I suspect that her thyroid has something to do with it.

I have omitted the bibliography as no original observations are included and no claim for originality is made.

A NEW UTERINE DILATOR*

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The Mayo Foundation, Rochester, Minn.

Dilatation of the cervical canal may require considerable force. This force must be applied slowly and gently; it must also be under constant complete control in order not to rupture or even to injure the cervix.

A new dilator, using the principle of double leverage, has been designed to meet these requirements. The instrument consists of three parts, the blades, the levers, and the handles. The blades are 7 cm. long, with a gentle upward curve, and with smooth ridges on the lateral surface to prevent them from slipping out of the cervical canal. They diverge in a V-shaped manner affording, at complete dilatation, a spread of 4 cm. at the tip and 2 cm. at the base (Fig. 1). The second part is 9 cm. long and consists of a double lever. The handles, which are curved downward, are 14 cm. long with grooves on the lateral surfaces. When the dilator is closed the handles are 12.5 cm. apart at the base (Fig. 2). The handles are sufficiently approximated before the initial resistance is encountered to fit comfortably in the average size contracting hand.

The principle of double leverage employed in this dilator gives a mechanical advantage of $\times 5$. That is, the force delivered by the dilating blades is five times that applied on the handles. This mechanical advantage is obtained by having the dilating blades open only one-fifth as rapidly as the handles close. The dilatation is thus not only powerful but also, as is essential, very slow. The powerful dilatation is an advantage to the operator in dilating the rigid resistant cervix of the nullipara and in cases of stricture and stenosis of the cervical canal. The slow dilatation is an important factor in dilatation of a soft edematous cervix, which may be

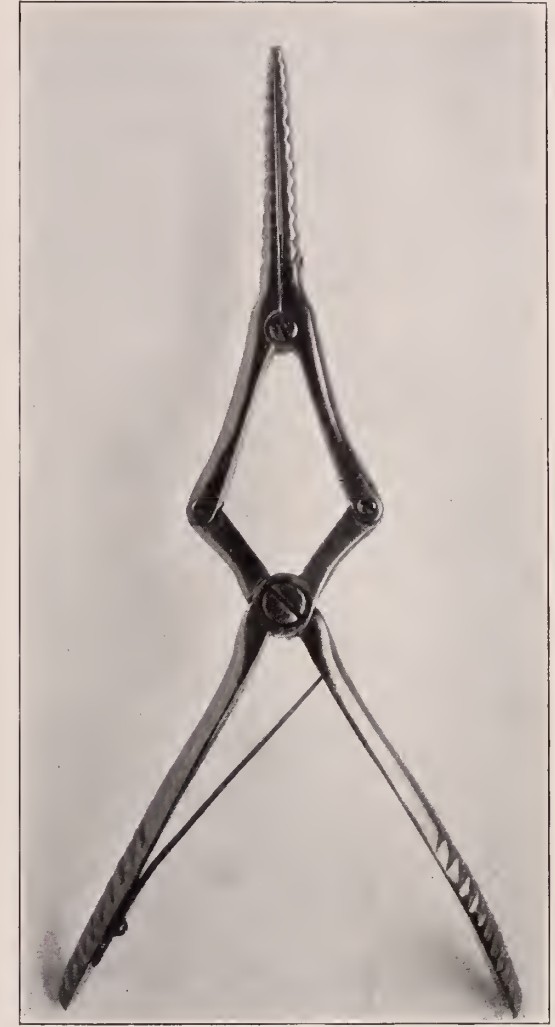


Figure 2.

easily injured or even ruptured by rigid uncontrolled force. The V-shaped separation of the blades affords the maximum of dilatory force at the site of greatest resistance, the external os and the region of the internal os.

The advantages of this instrument are: (1) simple construction, (2) slow dilatation, (3) powerful dilatation (mechanical advantage $\times 5$), (4) maximal force delivered at point of greatest resistance, and (5) unusually large force under constant control due to the slow dilatation.



Figure 1.

*Work done in Section on Surgical Pathology, Mayo Clinic.

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TUBERCULOSIS AND THE PERIODIC HEALTH EXAMINATION

The death rate from all forms of tuberculosis among the industrial populations of the United States and Canada, has declined nearly 40 per cent within seven years. The rate per annum among insured white persons for the first nine months of 1924 was 16.2 per 100,000, more than 8 per cent lower than any previous record. Better housing and ventilation, better food, more out-of-doors activity, pure air and sunshine, hospitalization of patients, fewer debilitating habits and hardships are doubtless factors contributing largely to this saving of human life, but the early recognition of activity, so essential to the successful "cure," may well be given a place of equal importance.

The periodic health examination, including careful history and inspection, palpation, percussion and auscultation, may be sufficient to exclude or detect early activity, but the roentgram will

often reveal lesions not detected by other means.

Justice to himself as well as to the applicant requires that all diligence be given the task if the periodic health examination or the physical examination of the chest is undertaken.

An early diagnosis campaign to be conducted throughout the month of March is being spon-

sored by the Florida State Board of Health, the Florida Public Health Association and all affiliated organizations in cooperation with the American Medical Association and national health agencies. This will bring to the medical profession many opportunities to render real professional service.

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Newman, H. P.....Bartow
O' Cain, W. M.....Bartow
Oglesby, J. M.....Bartow
Overstreet, G. C., Marble Arcade
Bldg.....Lakeland
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Pennington, B. Y.....Lake Wales
*Pennington, J. L.....Lake Wales
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Shafer, W. W.....Haines City
Sherman, W. E., 716 W. Central Ave.,
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Simmons, T. G.....Auburndale
Simpson, W. T.....Winter Haven
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Stetson, A. G. C., 941 S. Success
Ave.....Lakeland
Sullivan, R. R., 1006 Marble Arcade
Bldg.....Lakeland
Tillis, W. L., 215 Marble Arcade
Bldg.....Lakeland
Tomlinson, J. P.....Lake Wales
Vassar, T. D., Strand Bldg.,
N. Ky. Ave.....Lakeland
Weed, Walter A.....Lakeland
Wilhoite, R. E.....Lake Wales
Williams, E. L.....Ft. Meade
Wilson, C. H.....Bartow
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* Charter pending.
* Deceased.

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Hospital.....St. Augustine
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Stanton, G. J.....Hastings
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Clark, H. D.....Ft. Pierce
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Dunn, J. C.....Ft. Pierce
Eurit, F. B.....Stuart
Glidden, C. H.....Ft. Pierce
Grossman, Frederick A.....Vero Beach
Hardee, E. B.....Vero Beach
Lingo, M. J.....Okeechobee
Newnham, J. A.....Stuart
Parker, J. D.....Stuart
Whiddon, L. L.....Ft. Pierce

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Bldg.....Sarasota
Metzger, F. C., Sec'y-Treas., Walpole
Bldg.....Sarasota
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Bldg.....Sarasota
Halton, Jack, Miramar Court, Sarasota
Halton, Jos., Pineapple Ave., Sarasota
Harris, J. E., Bank of Sarasota
Bldg.....Sarasota
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Kennedy, David R., 1st Bank & Trust
Bldg.....Sarasota
Myers, N. P.....Mayo
Nash, H. C., Downey Bldg.....Sarasota
Patterson, J. C., 1st Bank & Trust
Co.....Sarasota
Slocumb, C. B., Amer. Natl. Bank
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Main St.....Sarasota
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Mitchell, C. M.....Sanford
Stevens, R. E., 1st and Palm Ave.,
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Tolar, J. N., 1st St.....Sanford

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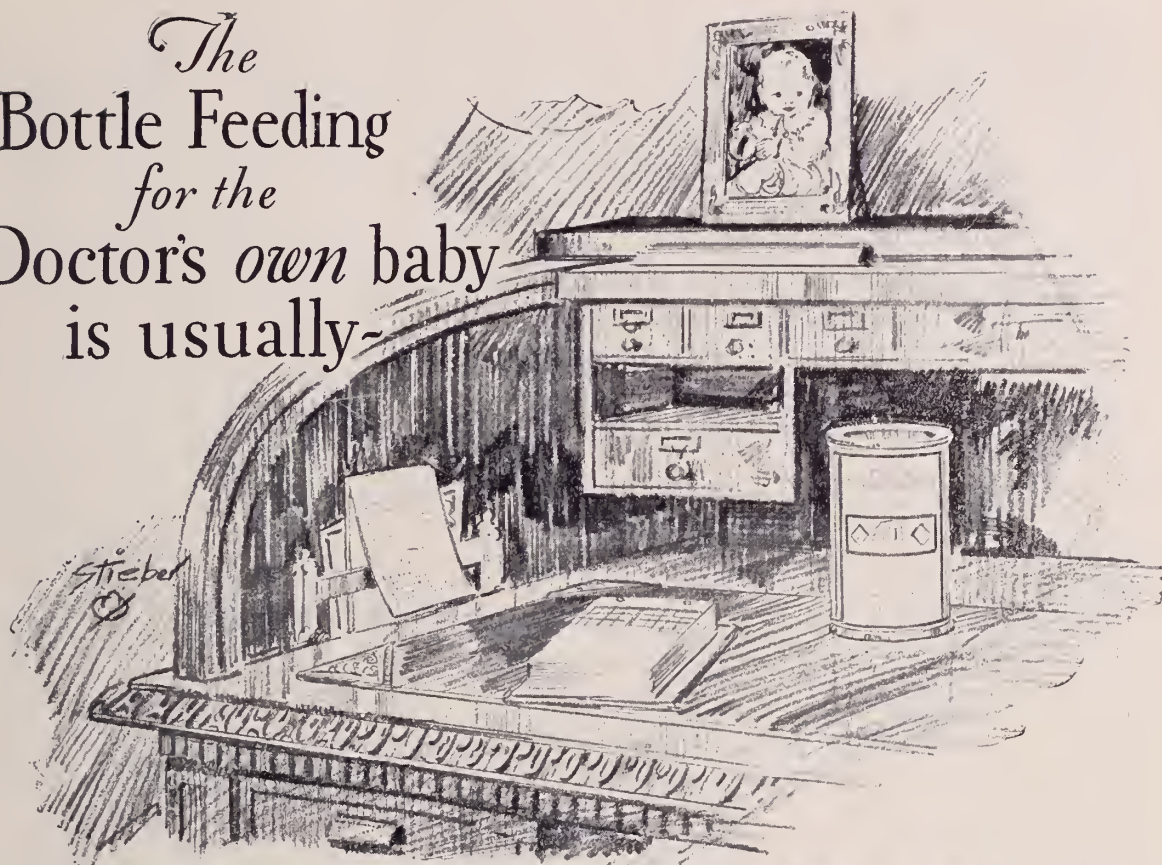
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Ave.....Daytona Beach
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St.....New Smyrna
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Davis, Joseph B.....Daytona Beach
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Drive.....Daytona Beach
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Ave.....Daytona Beach
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Bldg.....DeLand
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Ave.....Daytona Beach
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Ave.....Daytona Beach
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Crestview
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Huggins, E. L.....Freeport
McGuire, J. J.....DeFuniak Springs
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STATE NEWS ITEMS

The Panama City Hospital, Inc., which operates under the supervision of the Bay County Medical Society, recently elected the following officers: Dr. D. M. Adams, president; Dr. J. M. Nixon, secretary; Miss Dorothy L. Gadwell, treasurer and superintendent. The following constitutes the staff of this hospital: J. M. Nixon, chief of surgery; J. M. Whitfield, X-ray, skin and physiotherapy; W. J. Blackshear, anesthetics; W. J. Lee, diseases of rectum; D. M. Adams, nervous diseases.

* * *

At the December meeting of the Pasco-Hernando-Citrus County Medical Society, the following officers were elected: George A. Dame, Inverness, president; W. S. Hancock, Jr., Brooksville, vice-president; R. D. Sistrunk, Dade City, vice-president; and T. F. Jackson, Dade City, secretary and treasurer. The annual banquet of this Society was held at the Tangerine Hotel, Brooksville, January 12th. There was a good attendance and an excellent program was enjoyed. Among the visiting doctors were Drs. J. C. Chandler, and William Blake of Tampa and Herman Watson of Lakeland.

* * *

Dr. John S. Helms of Tampa was reelected chairman of the Florida Executive Committee for the American College of Surgeons at the conclusion of the two-day session recently held in Tampa.

* * *

At the December meeting of the Marion County Medical Society, the following officers were elected: H. W. Henry, Ocala, president; B. S. Stutts, Dunnellon, vice-president; J. L. Chalker, Ocala, secretary-treasurer. Dr. A. H. Freeman, Ocala, was elected to the censorship committee.

* * *

The annual banquet of the Hillsboro County Medical Society was held January 5th at the Davis Island Country Club. The society was host to the Pasco-Hernando-Citrus County Medical Society.

* * *

The Columbia County Medical Society at its December 19th meeting elected the following officers for 1928: T. H. Bates, president; L. J. Arnold, vice-president; P. C. Farnell, secretary. Dr. L. M. Anderson was elected delegate to the State Association, and Dr. J. H. Dyer, a member of the board of censors. The meeting date was

(Continued on page 422)

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* * *

The Volusia County Medical Society held its January meeting at the Boathouse Grill in DeLand.

* * *

At the January meeting of the staff of the Munroe Memorial Hospital, Dr. A. H. Freeman was elected Chief of Staff.

* * *

The Jackson County Medical Society met in regular session, January 10th. The following officers were elected for 1928: W. C. Box, Graceville, president; A. A. McKinnon, Marianna, vice-president; C. H. Harrison, Cottondale, secretary-treasurer. Dr. N. A. Baltzell, Marianna, was elected delegate to the State Association.

* * *

Dr. W. S. Nichols of Lake City, former district health officer, is in New Orleans doing special work in the Eye, Ear, Nose and Throat Hospital.

* * *

At the January 20th meeting of the Bay County Medical Society, the following officers were elected: W. J. Lee, Millville, president; D. M. Adams, Panama City, secretary; Drs. W. J. Blackshear, Panama City, W. J. Lee, Millville, and Dr. McGehee of Lynn Haven were elected to the board of censors.

* * *

Dr. Henry Hanson, formerly associated with the State Board of Health, has recently returned to Florida to take his position as field medical officer for the State Board of Health. During Dr. Hanson's absence from the state, he has spent much time abroad and in South America in public health work. His many friends in Florida were delighted to know that he was again making this state his official residence and, furthermore, that he is again identified with the public health work in the state.

* * *

At the recent annual meeting of the Duval County Hospital, the reports showed a very marked increase in the amount of work being done by this hospital. Mr. Richard P. Daniel, chairman of the Duval County Welfare Board, informed the staff that a fifty bed increase in the hospital was contemplated during the year. This will bring the capacity of this hospital to something over two hundred beds.

(Continued on page 424)

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The Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society held its last meeting at the Floridian Hotel, Tallahassee, January 12th at 3 p. m. Dr. H. E. Palmer, president of the Society, presided and the following program was rendered:

"Radium Treatment of Skin and Superficial Cancer," Dr. G. R. Holden, Jacksonville.

"The Nose," Dr. O. G. Kendrick, Tallahassee.

"Toxemias of Pregnancy," Dr. B. M. Rhodes, Tallahassee.

"Some X-ray Diagnoses," Drs. B. A. Wilkinson and F. Clifton Moor.

"The Immunizing of School Children," Dr. A. P. Harrison, Florida State Board of Health.

* * *

The annual sectional meeting of the American College of Surgeons for the states of Florida, Georgia, Alabama, Mississippi and Louisiana was held at the Tampa Bay Hotel in Tampa, January 26th and 27th. Clinics were held at the new Tampa Municipal Hospital each morning. Numerous hospital conferences were held and a municipal health meeting was also held on the evening of the 26th. On the afternoon of the 27th, a scientific program was rendered.

* * *

Dr. R. S. Gill of West Palm Beach and Miss Ruth Bowden of Midland, Georgia, were married at Stuart, Florida, December 12th.

* * *

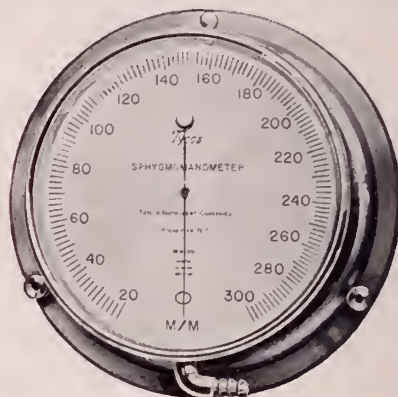
At the recent annual meeting of the St. Lukes Hospital Association, Jacksonville, Mr. P. L. Gaskins was reelected president of the Association. Mr. Gaskins informed the Association that during the year 1927, there were 43,211 patient days at the hospital. Of this number, 8,406 patient days were for charity and the remaining 34,805 for paid patients. This showed a marked increase in the charity work over the previous years.

* * *

At the January meeting of the Walton-Ocala County Medical Society, the following officers were elected: E. P. Webb, Crestview, president; E. D. Thorpe, DeFuniak Springs, vice-president, and A. G. Williams, Lakewood, secretary-treasurer. Drs. G. W. Spires of Darlington and J. J. McGuire of DeFuniak Springs were elected censors.

(Continued on page 426)

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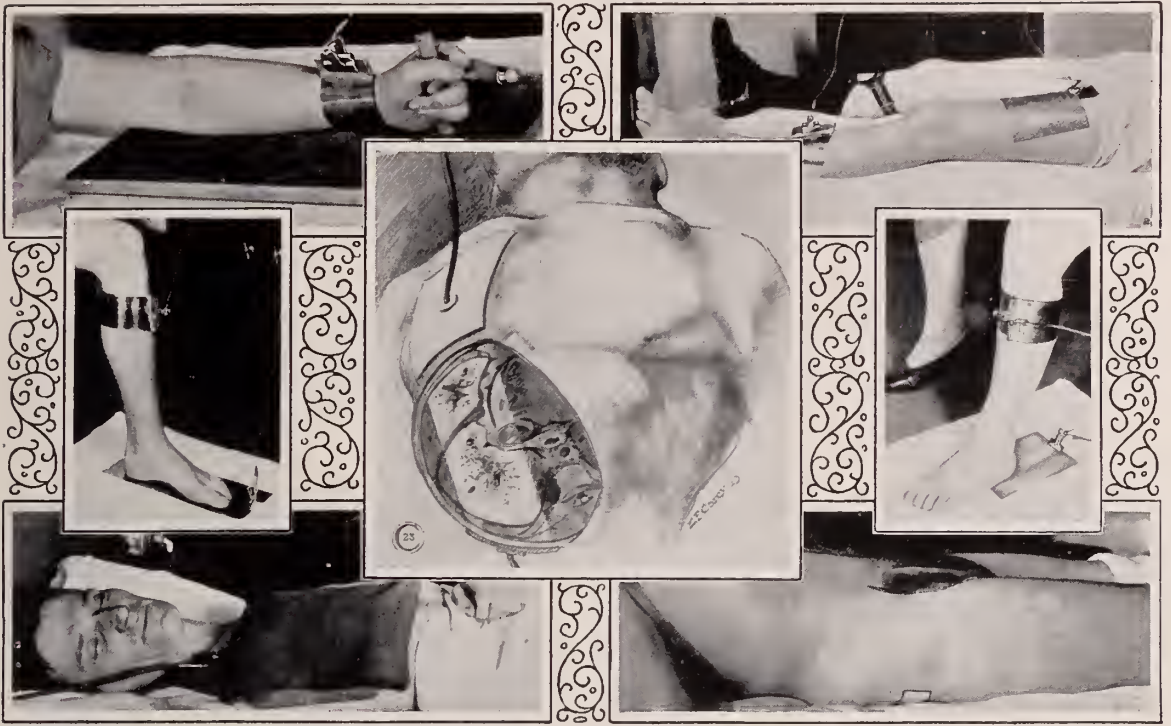
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Drs. M. A. Lischkoff and W. C. Payne of Pensacola attended the Tampa meeting of the American College of Surgeons.

* * *

During the month of January, the following papers were read before the Pinellas County Medical Society:

"Brill's Disease," J. A. Mease, Dunedin.

"Case Report," W. D. Anderson, Largo.

"Glaucoma," M. H. Stuart, St. Petersburg.

"Gallbladder," L. A. Wylie, St. Petersburg.

* * *

Dr. C. T. Nolan of Marietta, Georgia, died while attending the recent meeting of the American College of Surgeons held in Tampa. Dr. Nolan was stricken with angina pectoris and passed away very suddenly. He was an outstanding figure in Georgia medical circles and for the past sixteen years had been secretary of the Board of Medical Examiners.

ADVERTISERS' NOTES.

LISTER'S DISTRIBUTORS.

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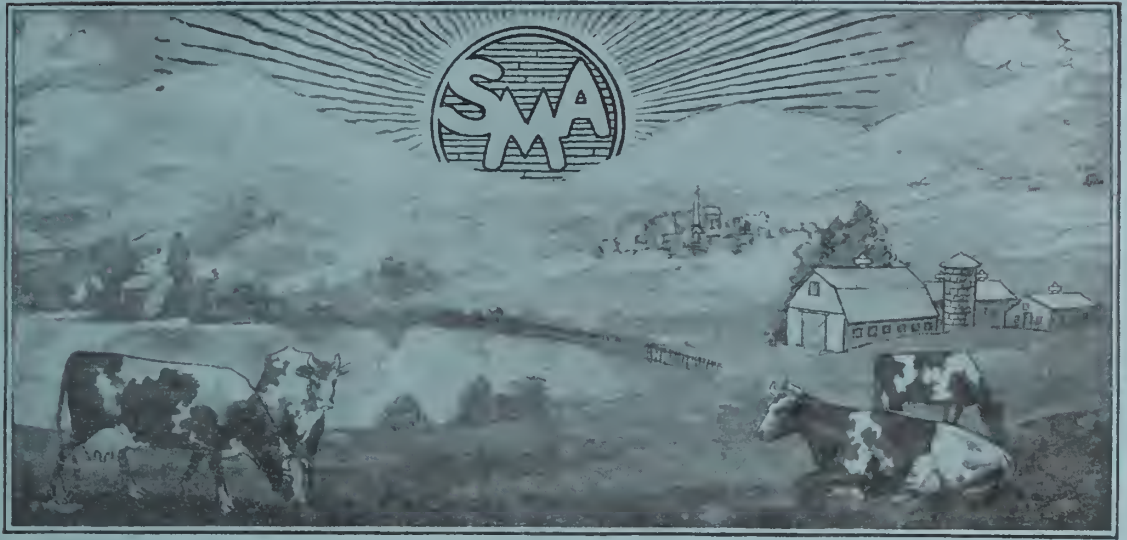
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MEETINGS						
County Society	Secretary	Date	Time	Place	Luncheon?	Dues Paid.
Alachua	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	D. M. Adams, M.D., Panama City.					71%
Bradford	Seeber King, M.D., Lake Butler.					
Brevard	Geo. W. Wood, M.D., Cocoa.	Varies		Varies		
Broward	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	
Columbia	P. C. Farnell, M.D., Lake City.	1st Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	7%
DeSoto-Hardee-Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	70%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Arnold-Edwards Auditorium	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton	R. A. Barnett, M.D., White Springs.					
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	27%
Lee	W. H. Grace, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden-Liberty-Wakulla-Jefferson.....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	
Monroe	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Monterey Hotel	Yes.	23%
Pasco-Hernando-Citrus.....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	40%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	
Polk	Geo. C. Overstreet, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
*Putnam	E. W. Warren, M.D., Palatka.					100%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Monday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeechobee-Indian River-Martin.....	G. C. Hardie, M.D., Ft. Pierce.					10%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	Chas. Park, M.D., Sanford.					
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					70%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	33%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	

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NO. 9

Jacksonville, Florida, March, 1928

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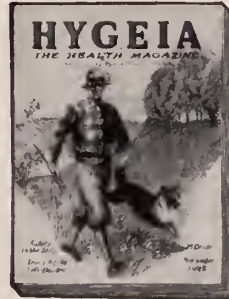
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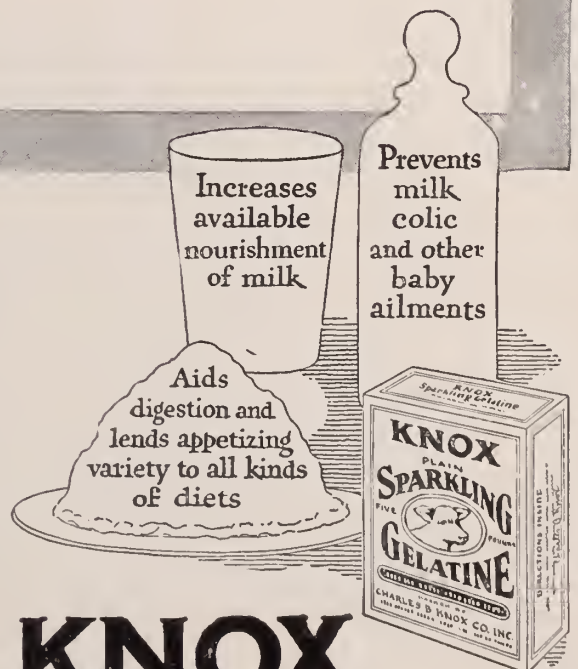
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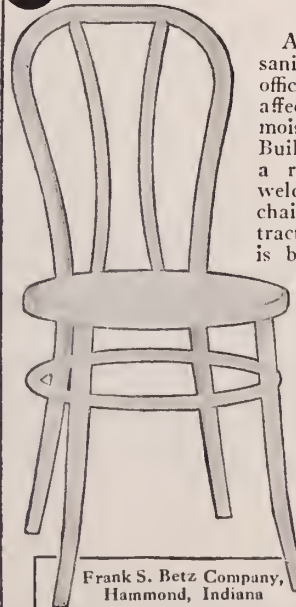
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JAUNDICE

E. W. BITZER, M.D.,
Tampa.

The great number of papers published in recent years dealing with tests for liver function, marks the need for more accurate methods in the diagnosis of liver diseases and stresses the growing conviction that much remains to be learned, from a clinical point of view, concerning one of the most important and complex organs in the body. In presenting this subject, I feel that it is the most important key to the study of the pathology of the liver that we possess at the present time. The reason for this is manifest, in that the presence of so obvious a symptom as jaundice would stimulate a determined search for its mechanism.

Modern investigations suggest that bilirubin is formed in the reticuloendothelial system, the Kupfer cells of the liver, and especially in the spleen and bone marrow. At the Mayo Clinic, Mann, Bollman and Magath¹ were able to keep dogs alive for from twenty-four to thirty-six hours after total extirpation of the liver, and proved that bilirubin continued to be formed. Bilirubin is formed from hemoglobin and is present in normal blood up to 2 mg. per 100 cc. of blood, and probably, in the absence of obstructive jaundice, is combined with a protein element from which it is freed after passage through the liver. Upon this knowledge is based one of the most valuable tests we possess, the Vanden Bergh reaction.

Urobiligen² is formed from bilirubin by bacterial action in the intestinal tract, and part is excreted in the feces and part is absorbed and carried back to the liver, from which only a small amount normally escapes into the circulation to be excreted in the urine.

In the hepatic types of jaundice, bilirubin is reabsorbed through the blood vessels and lymphatics.

The clinical classification of McNee¹ is most useful for ordinary purposes. He distinguishes (a) hemolytic jaundice, (b) obstructive hepatic jaundice, (c) toxic and infectious hepatic jaundice. I would amend the last two, however, and

substitute (b) extrahepatic and (c) intrahepatic jaundice. The objection may be raised that obstruction may occur in the larger bile ducts within the liver but this is rare, where as the jaundice occurring in cirrhosis, for instance, is both obstructive and toxic or infectious in origin. It is also true that all cases of obstruction or extrahepatic jaundice of some duration are associated with some degree of hepatitis.

HEMATOGENOUS JAUNDICE.

In diseases in which excessive blood destruction occurs, the liver is not able to excrete the excessive amount of bilirubin formed. This results in an increase of the serum bilirubin and an icterus. Such conditions are pernicious anemia, hemolytic jaundice, acquired and familial, certain internal hemorrhages, malaria, the anemia produced by the fish tape worm, icterus neonatorum and other hemolytic states.

In this type, the discoloration of the skin is not pronounced and itching is absent.

EXTRAHEPATIC JAUNDICE.

The commonest cause of jaundice from obstruction of the extrahepatic bile passages is gallstones. Jaundice of slight degree is very frequently seen and, occasionally, complete obstruction. Carcinoma of the head of the pancreas and the bile ducts usually causes jaundice, while growths in other locations may result in jaundice through pressure on the bile duct. Enlarged glands and aneurysms are occasional causes. Stricture of the common duct may be found and may be a primary condition or secondary to an operation. This list is by no means exhaustive, but is sufficient to illustrate this type.

INTRAHEPATIC JAUNDICE.

This group is much more complex, in that other uncertain factors are introduced, in addition to the possibility of obstruction within the liver. Two groups are recognized: (a) due to infections and (b) toxic. It must be admitted that these groups overlap and that both factors are frequently present in the same case.

(a) The only known specific infection producing jaundice is the leptospira icteroides which is responsible for Weil's disease. Riesman¹ and others have described an infectious type occur-

ring in several members of the same family but all efforts to find the infecting agent were fruitless.

So called catarrhal jaundice, while not infectious, is probably due to infection which may involve the bile passages, but is essentially a hepatitis. Closely related to this is acute yellow atrophy of the liver which is not chemical in origin. Bauer considers that acute yellow atrophy is at times little more than a very severe type of catarrhal jaundice. Inflammatory conditions of the gall-bladder associated with jaundice are a secondary type of cholangitis and hepatitis, and that associated with pneumonia, septicemia and other infections similar in character.

The jaundice occurring in cirrhosis of the liver is at times probably dependent upon infection plus other toxic factors, and in some cases altogether due to infection. The effect of alcohol in the production of portal cirrhosis is in all probability very much overestimated, and may only prepare the field for secondary infections. In the biliary type, no specific infection has been found but it is certain that infection plays some part in its production. Dissociated jaundice³ is due to a retention of bile salts without retention of bilirubin, and occurs most frequently in biliary cirrhosis and is characterized by severe itching of the skin. In syphilis of the liver and syphilitic cirrhosis, jaundice may occur and in this case is due to a specific organism. Passive congestion of the liver from heart disease may be associated with icterus and is probably mechanical with a secondary infection.

(b) The toxic group comprises the chemical liver poisons chiefly, the arsenical group, chloroform and phosphorus. Of this group toxic jaundice from arsphenamin has become rather common. There are occasions in the treatment of syphilitics when it may be very difficult to decide whether the jaundice is the result of the treatment or of the syphilis. It is certain, however, that it is wise in the treatment of syphilitics to carefully watch for the early signs of liver involvement.

DIAGNOSIS.

The identification of a well-marked jaundice requires no comment but the search for the cause is often a difficult task. When we consider in addition, that large group of cases in the preicteric stage, which accurate laboratory methods have enabled us to detect, occasionally

our problem is solved but often our diagnostic difficulties are multiplied. At this point I should like to emphasize the importance of a careful history and physical examination. This, unquestionably, is of the first importance. Laboratory tests, while important, unless considered with the history and physical findings, may be very misleading.

The laboratory methods are of two types: (1) tests for bile pigment, (2) tests of liver function.

(1) Erlich's Aldehyde reaction for urobilinogen in the urine is the simplest of all the tests and one of the most useful when properly interpreted. It is usually positive in any disturbance of the liver, even passive congestion. Aside from the liver, it is often positive in constipation and unless this is eliminated, the test may be worthless. Its greatest value, however, is in the differentiation between a partial and a complete obstruction. In the presence of a frank jaundice a negative aldehyde reaction suggests a complete obstruction because urobilinogen is formed from bile by bacterial action in the intestinal tract and in the absence of bilirubin cannot be formed. A persistent complete obstruction suggests malignancy.

The Vanden Bergh reaction is a test for bilirubin and may be quantitative or qualitative. In addition, it may be direct, indirect, or biphasic. The direct reaction occurs in obstructive types of jaundice and represents bilirubin that has passed through the liver. An indirect reaction occurs in the hemolytic types. The biphasic type is suggestive of intrahepatic pathology, especially hepatitis.

Similar to the Vanden Bergh test is the icterus index. It is a qualitative test for bile pigment in the serum, but is not so accurate.

(2) Of the tests for liver function the one that has received most attention is the dye test, phenoltetrachlorophthalein and tetrabromphenolphthalein. Rowntree⁴ has experimented extensively with this test and is convinced that it is a very useful procedure. It is most definitely positive in bile retention and the degree parallels that of the retention. It offers no hope of distinguishing between jaundice of extra or intra hepatic origin. Bauer,⁵ an exponent of the galactose test, does not believe there is much to be gained from the dye tests. On the contrary, he believes that in the galactose test we have a means of differentiating intra and extra hepatic

conditions with or without bile retention. However, it is admitted that in the presence of ascites, it is unreliable. Diamond² has tested this method and has not found it very useful. Our experience with it has been rather disappointing.

Of all the laboratory methods, undoubtedly, the most valuable are the Aldehyde reaction and the Vanden Bergh.

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CERVICAL CESAREAN SECTION

FRANKLYN THORPE, M.D.,

Tampa.

Although Cesarean section through the lower uterine segment had been advocated nearly one hundred and twenty-five years ago by Oslander of Goettingen, very little seems to have been done to develop and perfect this technic until 1908, when Hirst of Philadelphia, and Veit of Halle, Germany, working independently, both advocated the transperitoneal route for neglected cases.

To a certain extent the operation seems to have been revived and perfected to its present state through a certain force of necessity. Its first general adoption appears to have occurred in Germany. Due to scarcity of obstetricians in that country during the last war, increasing numbers of women were found entering the clinics in need of the Cesarean operation in the late stages and after the usual promiscuous examinations at the hands of midwives. An altogether too great percentage of these potentially infected cases faced peritonitis under the old classical operation. Interest became renewed in the work done in developing a safer route by Selheim, Kroenig, Veit, Fromme, Franz, Opitz, and others.

In this country, after Hirst, DeLee, Beck, Polak, Phaneuf, and many other American obstetricians began to use the cervical Cesarean operation with various slight modifications. After eight years of experience in the hands of these and other operators, covering a large series of cases, it appears not only to have accomplished its primary purpose of lowering the mortality of the type of case mentioned above, but also to possess many marked advantages over the older

operation for clean cases as well, which more than compensate for its slightly increased technical difficulty.

ADVANTAGES OF THE CERVICAL CESAREAN.

1. From the large mass of statistics compiled by those who have employed both types of operations, it appears well borne out that in addition to maternal and fetal mortality being definitely reduced, that the morbidity is definitely reduced as well. The convalescence in clean cases is much freer of the distressing complications, such as gas-pains, ileus, dilatation of the stomach, intractable nausea and vomiting, hiccough, etc., which so often characterized the post-operative course of the older classical operation. That the cervix stands infection better than the body of the uterus seems well established by gynecological experience. Infection therefore is less likely to occur, and when unavoidably it does occur, it is in the pelvis which is more resistant to the infection than the abdomen. Infection at this site usually resolves itself to a pelvic abscess which can be both easily and well drained from below. In offering a better prognosis for late and potentially infected cases it widens the benefits of the Cesarean to both mother and child, oftentimes permitting the delivery of the living child through the abdomen, when under certain conditions the classical operation would be fraught with danger to the mother, and the pelvic delivery perhaps mean a stillborn child.

2. Placing the incision in the noncontractile portion of the uterus possesses certain fundamental anatomical and physiological advantages: there is less likelihood of leakage of infected uterine contents through the wound; it is the less vascular portion of the uterus; its healing is less disturbed, therefore lessening the possibility of rupture in subsequent pregnancies.

3. Since the uterine incision can be peritonealized, utero-parietal and other distorting adhesions are almost never seen, in fact, a large number of operators have remarked upon the absence of adhesions and also upon their inability to find the cervical scar in repeated cervical Cesarean operations.

4. Hernias in suprapubic median incisions are less likely to occur than with the high abdominal incision.

5. A test of labor may be given safely—a point repeatedly noted by those having experience with this method, thus enabling some parturients to be delivered through the pelvis, who,

in the absence of the labor test, might otherwise have been delivered abdominally.

MODIFICATIONS OF THE CERVICAL CESAEREAN.

Although there are numerous small technical variations in the performance of the cervical Cesarean, three methods or types are generally recognized: the intraperitoneal, the transperitoneal, and the extraperitoneal.

1. The intraperitoneal, generally spoken of as the modified Selheim, or Kroenig, is an intraperitoneal, retrovesicle operation. The abdomen is opened by a median, longitudinal, suprapubic incision; the utero-vesicle plica of peritoneum is incised transversely about half an inch above the margin of attachment of the bladder; the bladder is separated from the anterior surface of the uterus and held out of the way behind the symphysis pubis, as in doing a hysterectomy. If desired, an upper flap of peritoneum may also be raised by separating the peritoneum along the upper margin of the transverse peritoneal incision from the anterior surface of the uterus, thus making two peritoneal flaps, an upper and a lower, thereby giving in some cases somewhat better exposure. A median longitudinal incision is then made in the denuded lower uterine segment and the fetus, placenta, and membranes extracted, after which the uterine incision is quickly closed and completely covered by bringing up the lower bladder flap of peritoneum, the edge of which is united to the edge of the transversely incised peritoneum above by a long continuous suture. This is the only line of suture exposed to the peritoneal cavity and falls behind the bladder as the organ fills.

2. The transperitoneal operation is usually spoken of in this country as the Hirst operation. This method differs from the preceding, in that the uterovesicle peritoneum is incised longitudinally instead of transversely. The bladder is separated from the anterior surface of the lower uterine segment; this leaves two lateral flaps of visceral peritoneum, the edges of which are united to the edges of the parietal peritoneum above by fine catgut, thus sealing off the peritoneal cavity from the spill of the uterine contents when the womb is incised. A longitudinal incision is made in this extraperitoneal space through the lower uterine segment, and the fetus, placenta, and membranes removed. After closure of the cervical incision, the two united edges of the visceral and parietal peritoneum are approximated by a continuous suture of catgut,

thus making the uterine incision an extraperitoneal one.

3. The extraperitoneal method, sometimes known as the Latzko operation, is done by lifting the unopened peritoneal sac off the anterior portion of the inlet and lower uterine segment. Incision is made in the cervix thus cleared. This method, as can be seen, possesses certain technical difficulties which add to the time necessary for its performance and consequently has never been as popular as the first two methods described.

In clean cases, the intraperitoneal, retrovesicle operation, is the one usually employed, while in cases where the patient has been a long time in labor, with ruptured membranes and vaginal examinations, but who is still in good physical condition and without fever, the transperitoneal method is generally employed.

Without question, well directed and efficient speed in the performance of any type of Cesarean operation is one of the prime essentials for its successful performance. A well-trained crew of assistants is almost as important as good technic. And yet it has seemed that the well-recognized necessity for speed has been somewhat over-emphasized for certain parts of the operation. To allow as short an interval as possible between making and closing the uterine incision is so obvious it is axiomatic, but from here on there is no greater need for haste in the average case than in a laparotomy. In the cervical Cesarean, no greater time need elapse between making and closing the uterine incision, than in the older operation.

The imagined technical difficulty of separating the bladder from the anterior surface of the lower uterine segment has kept many, familiar with the older operation, from attempting the newer. Whether the state of pregnancy, or the higher position of the uterus and bladder at this time renders it more easily separable than in the ordinary hysterectomy, it is a fact repeatedly noted by those familiar with the operation that the separation of the bladder offers little difficulty, even in repeated Cesareans. A little blunt dissection with the scissors, or the knife-handle and the finger, is usually all that is necessary. Later, the closure of the peritoneal flaps with a long, continuous suture, takes but a moment.

In routine cases, my procedure is as follows: for several days before arrival at the hospital the patient is alkalinized. Two drachms of tri-

basic citro-carbonate in a glass of water every four hours can be recommended. Plenty of water, but only a light diet is allowed the day before operation. Where the date of confinement cannot be estimated with at least a relative degree of certainty, it is, of course, better to have the patient a few days early in coming to the hospital. Upon arrival at the hospital, the patient first receives a thorough cleansing of the lower bowel with one or more 5% soda-bicarbonate enemata. Soapsuds are not used. The surgical field is then shaved and prepared in the usual manner. One hour before operation, a rectal ether-oil instillation is given, as described by Gwathmey and Harrar. This consists of a four-ounce olive oil mixture containing ten grains of quinine alkaloid dissolved in a drachm of alcohol, plus two and a half ounces of ether. The solution is instilled into the rectum by gravity through a rubber catheter attached to about three feet of tubing with a small funnel. Instillation of the mixture is preceded and followed by about an ounce of plain olive oil. Twenty minutes before operation, a deep intramuscular injection is given in the buttock containing a sixth to a quarter grain of morphine dissolved in two cubic centimeters of a 50% saturated solution of chemically pure magnesium sulphate.

At operation, the skin and abdominal wall is anaesthetized with one-half per cent novocaine, and a mid-line, suprapubic incision about five inches in length is carried through the abdominal wall. The patient is then placed in a moderate Trendelenburg position and the intestines carefully packed out of the way. At this stage, and before incising the visceral peritoneum over the uterus it may be necessary to give a little supplementary ether by inhalation. This is on account of the sensory innervation of the peritoneum. It is my custom to test the degree of sensibility of the peritoneum with the pick-up forceps, withholding the ether inhalation if its use is considered unnecessary. More often than not, it is not required. When used, only a very small amount is required; the patient takes it easily and quietly with no stage of excitement, gagging, holding the breath, vomiting, and other unpleasant reactions usually associated with straight ether inhalation.

Suction tubes, gauze, and other means of taking care of the spill take additional time with no added advantages. Before closing the abdomen, a quick peritoneal toilet is made.

When the bladder flap of peritoneum has been separated, as before described (intraperitoneal or Selheim method) it is held anteriorly beneath the symphysis by a retractor in the hand of the assistant. A mid-line incision of about the same length as the abdominal incision is then made in the lower uterine segment. A small opening is first made with the knife, the finger is inserted within the uterus as a guide and the incision completed with a pair of large, blunt-pointed, angled bandage scissors, to avoid danger of injury to the child.

As soon as the uterus has been emptied of its contents, the nurse administers two hypodermics, the first, one cubic centimeter of pituitrin, and the second a like amount of ergot. The opposite angles of the uterine incision are quickly sutured with No. 1 or No. 2 chromicized catgut on a fairly large curved hand-needle. The ends of these sutures are clamped long and held upward and apart by the hands of the assistant. This both elevates and approximates the edges of the uterine incision, so that the operator may very quickly complete the closure with close-spaced interrupted sutures. The bladder flap of peritoneum is brought up from behind the symphysis and the edge united to the edge of the upper peritoneal flap with a single continuous suture, thus completely peritonealizing the uterine incision. A quick peritoneal toilet is made; the uterus and intestines replaced, and the abdomen closed after the usual manner.

The patient usually reacts quickly to the small amount of ether used; often with either very slight nausea and vomiting, or none at all. A drachm of fluid extract of ergot is given by mouth every four hours until two or three doses have been given. Five per cent glucose solution is given by proctoclysis if required, but is not used routinely. The bowels are regulated the first week by enemata, the first being usually given the morning of the fourth day. The bladder is catheterized every eight hours if necessary. Codeine and aspirin are usually sufficient to control pain or discomfort. Stitches are removed the ninth or tenth day and the patient discharged on the fourteenth.

Any major operation has its definite percentage of mortality. Hemorrhage, shock, pulmonary embolus, sepsis, may occur in the cervical Cesarean as well as in the classical Cesarean; however, it does not seem fair to assume that mortality from the above-mentioned causes

should be directly due to the mere difference in technic, as the articles of some writers opposed to changing their technic from the older method to the newer, would seem to imply. Statistics as given by Hirst, DeLee, Polak, Beck, Phaneuf and others show a lower comparative mortality for the cervical Cesarean. This, of course, is chiefly brought about by the better prognosis afforded in infected cases.

CONCLUSIONS.

By the cervical Cesarean:

1. Maternal and fetal mortality are reduced.
2. Maternal morbidity is lessened.
3. A test of labor may safely be given.
4. The possibility of rupture of the uterus in subsequent pregnancies is lessened.
5. Hernia of the abdominal wound is less likely to occur.
6. A better prognosis is offered infected and potentially infected cases.

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FRACTURE OF SPINAL VERTEBRAE. REDUCTION BY SUSPENSION— REPORT OF TWO CASES.

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In reading the literature on this subject, all are agreed that reduction, relief of pressure on spinal cord, immobilization by one means or another, with absolute rest, are the things to be accomplished.

In the first place let us briefly review the anatomy of the back, the bony frame work. The vertebrae are divided into groups, the cervical, dorsal, lumbar, sacral and coccyx. With slight variation, all the vertebrae have the same fundamental basic structure. There is the neural canal through which the spinal cord passes, the body, the lamina, transverse processes, fascets, dorsal spine and articular surfaces. These vertebrae are separated one from the other by vertebral discs and held together by ligaments and muscles. The ligaments are strong fibrous bands, anterior,

lateral, etc. The muscles are, again, strong, heavy bands, some having their point of origin and attachment on the vertebrae, others either origin or attachment elsewhere. From the lateral foramina the nerve branches come from the spinal cord and pass to the various parts of the body.

Now just what happens to the vertebra or vertebrae when fracture has occurred? What happens to the spinal cord? If there is merely the dorsal spine fracture or a lateral fascet, immobilization in a circular plaster cast, or on a posterior plaster molded shell, or, in selected cases, absolute rest in supine position in bed may be all that is required.

There has been much written about laminectomies in crushing injuries to the vertebrae. In this operation the mortality rate is very high and there is always the possibility of infection. It would seem that laminectomy for fracture of the spine should be only the last resort, and then only after every other possible means of treatment had been exhausted.

It is the desire of the writer now to report two cases, in full, at the same time as briefly as possible commensurate with clearness, on completion of which draw his conclusions.

CASE NO. 1, R. O. O'G.

Admitted: October 25, 1926.

Dismissed: December 29, 1926.

History—Accidentally incurred October 25, 1926, about 3:45 p. m., Euceta Shops, A. C. L., while working on roof, bending some iron to get things to fit, jack broke, lost balance, grabbed fellow worker, and fell 40 ft. to ground; doesn't remember striking anything on way down. Unconscious about 20 minutes; remembers being put in B. Marion Reed Ambulance, brought to Gordon Keller Memorial Hospital.

Physical—Irrelevant, except for condition as shown in diagnosis.

Diagnosis—(1) Contusion, moderate severe, orbital region, left.

(2) Abrasion, mild, upper lid, inner half, left.

(3) Contusion, moderate severe, bridge of nose.

(4) Contusion, severe, spine, over 4th, 12th dorsal, and first lumbar vertebrae.

(5) Fracture simple, comminuted, lateral lamina, anterior 2/3-12th, dorsal spine involving superior articular surface.

(6) Shock, general, moderate severe.

Operative Procedure—October 26, 1926—Application of Plaster Cast.

Patient suspended on 2½" bands, placed transverse on an open oblong gas pipe frame, spine pulled out as much as possible, A. P. and lateral alignments then obtained in normal position and curves. With patient in this posture, circular plaster cast applied, extending from axillae to level of great trochanters of femurs. After same set, bands were removed and patient placed in bed with long fracture boards.

Laboratory—X-ray Reports:

In the X-ray examination of your patient, Mr. R. O. O'G., the films do not show evidence of a fracture of the skull.

The films of the vertebrae show a crushing fracture of the 12th dorsal vertebra. There is a very small amount of displacement or deformity of the body.

Re-examination of the vertebrae of your patient, Mr. O'G., shows the reduction and callus formation to be perfectly satisfactory.

Films of the feet show no evidence of bone pathology.

Wassermann Report: Negative.

Examination of Urine: Negative.

Progress—End of 6 weeks, sit up in bed.

End of 6½ weeks, up in wheel chair.

End of 7 weeks, cast off, allowed to walk.

Condition on completion of case: No deformity. In all arcs of motion of spine, obtained full function. Cured.

CASE NO. 2, MR. W. L. C.

Admitted: December 11, 1926.

Dismissed: March 17, 1927.

History—Accidentally incurred Dec. 11, 1926, Lyons Iron Works, while climbing to top of "I" beam at eaves, hand slipped off on rain wet beam, dropped some 40 ft. to ground, striking on keg of rivets and plate of concrete. Brought to Gordon Keller Memorial Hospital in friend's automobile.

Physical—Irrelevant, except for condition as shown in diagnosis.

Diagnosis—Fracture simple, first lumbar vertebra, crushing, severe. (2) Sacroiliac sprain, right, severe.

Operative Procedure—Application of Plaster Cast (Duration, 25 min.)

Patient lying on back on litter top, one man on each side holding him up by armpits, litter board put in upright position and while patient was held free from weight on legs head gear was

applied and patient suspended on jury mast and hoisted feet clear of the floor, suspended wholly by head, arms allowed on suspension bar to steady.

Manipulation of spine then done. Deformities, kyphosis and scoliosis, completely reduced. Circular plaster casts from axillae to great trochanters of femurs, applied, reinforced with plaster slabs. After cast set, abdominal window cut in, patient on fracture bed, on back.

Laboratory—X-ray Reports.

(1)

X-ray examination of the spine and pelvis of your patient, Mr. C., shows a crushing fracture with a wedged-shaped deformity and posterior displacement of the fragments of the first lumbar vertebra. No other evidence of fracture could be seen.

(2)

Re-examination of the lumbar spine of your patient, Mr. C., shows the reduction and apposition of the fragments to be perfectly satisfactory.

(3)

Re-examination shows satisfactory callus formation about the crushed first lumbar vertebra.

The general alignment of the spine is very satisfactory.

Laboratory—Wassermann Report: Negative.

Examination of Urine: Positive—Plus 1. Albumen.

Progress—End of 7th week, back rest.

End of 8th week, wheel chair.

End of 8½ weeks, cast off.

End of 9th week, allowed to walk.

Condition on completion of case: No deformity. In all arcs of motion of spine obtained full function. Cured.

CONCLUSIONS.

In Case No. 1, where there was merely a complete fracture through the lateral lamina of a vertebra without displacement, patient prone, suspended on transverse bands, Bradford gas pipe frame, normal curvature of spine obtained, application of cast, then to bed in supine position is all that is indicated.

In Case No. 2, where there was crushing of the body of the vertebrae depression of lateral laminae, both kyphosis and lordosis, suspension in head gear on jury mast to accomplish reduction, is indicated. The weight of the body, the pull of the vertebral ligaments and back muscles, tend to pull the fractured fragments

into their proper position, aided by the gentle manipulation of the spine in all its arcs of motion, in a few minutes time completely reduces the deformity, puts fragments and vertebrae in their normal position, relieves pressure. Reduction accomplished cast is applied, patient still suspended by the head. Someone asks what about traumatism to the spinal cord as this is accomplished.

If you will digress with me for a moment. Suppose there is taken a porcelain tube about 2 ft. long and about 1 inch in diameter, wall $\frac{1}{8}$ " thick, and there be firmly glued to the outside of this porcelain tube a tube of stockinette just large enough in diameter to snugly admit the porcelain tube. Now, after the glue is completely dry and hard, let us take a hammer and break the middle inch or two of the porcelain tube into several comminuted pieces. Each comminuted piece will still be firmly fastened to the stockinette tube surrounding the porcelain. These comminuted portions will be lying in different planes, some much depressed from the surface. Now we will consider that in the canal of the porcelain tube is suspended a round cotton fibre lamp wick, filling $\frac{2}{3}$ of the canal. Our problem is how most quickly and with the least trauma to get the pressure off the wick and put the fragments where they belong. To lay the tube down and use hammer and chisel increases trauma and after removing comminuted pieces, still in lying posture, even if pressure is removed, it is almost impossible to put remaining fragments in normal position and have porcelain tube regain normal curvature. This, in a way, simulates laminectomy. But on the other hand, if, after breaking the middle two inches of the tube in comminuted pieces, to hang the tube up, what happened? The stockinette, fastened to each comminuted piece, with a little manipulation as it hangs, draws the comminuted pieces in their normal position, pressure is relieved from wick and normal curvature is restored. If we think of wick as spinal cord, porcelain tube as vertebrae and the stockinette as ligaments and muscles, we have accomplished by hanging the broken porcelain tube up, the same mechanical principle as when we place a patient in head gear suspension on jury mast.

In accomplishing the reduction no trauma has been caused by chisel and hammer, no portion of the laminae have been removed making convalescence, even though successful, longer.

Someone asks what about paralysis or pressure due to blood clot? My answer, as to paralysis, is that in nearly all cases the paralysis, if present, is due to trauma at time of injury. If you have accomplished your reduction the causal factor of bony pressure has been removed. As to blood clot, reduction accomplished and immobilization in cast, ordinarily the blood clot will absorb.

After reduction and cast on jury mast suspension, if X-ray shows complete reduction, which it should if the manipulation has been successfully done, if though there may be paralysis, nothing further is indicated at this time. Should the paralysis, instead of diminishing, gradually increase, the question of laminectomy should be considered.

However, in practically all cases of crushing fracture of body and lamina of vertebrae, the jury mast suspension will give complete reduction with a far more satisfactory result, and decidedly much smaller mortality than laminectomy. To obtain the best results and lowest mortality, the jury mast suspension for complete reduction is strongly recommended in preference to laminectomy.

DISCUSSION.

Dr. John S. Helms said it was a very good paper, and that the neurological findings should largely determine the indication for laminectomy. Dr. R. A. Ely highly commended the paper as a practical method of obtaining relief from pressure on the cord and reduction of deformity in spine fracture.

In closing your attention is brought to the fact that if there is no mast available same may readily be constructed in the following manner:

The mast, as was shown, was made by using three ten-foot lengths of one and a half inch gas pipe. About three inches from one end of each, a transverse hole was bored, the three pipe ends joined by a single bolt, one ring hook suspended from the bolt between the bolted pipe ends, and other ends of pipe spread out so as to form a tripod with bolted end with ring hook at apex. An equilateral triangle, four feet in length on each side, is made of boards, three inches wide, one inch thick, at each apex of the triangle a two-inch hole is bored and placed flat on the floor. The base of the three legs of the tripod is placed in the holes of the equilateral triangle wood platform, to avoid slipping. Two double block pulleys carrying one-inch manila rope are rigged,

one to hook at tripod apex, one with hook to ring in middle of three foot long, one-inch gas pipe transverse bar. After fastening head gear, to give pull on under surface chin and occiput with head slightly tilted back, to transverse bar, and adjusting by taking up on tackle rope, patient is hoisted by head clear of the floor. The pulley rope is made fast to an iron pin passing through one of the tripod legs. The head gear rope was made of 1¼" width, heavy fibre tape.

THE PATHOGENIC SIGNIFICANCE OF CALCIUM INSUFFICIENCY

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In our daily clinical routine and under the light of modern research we find a definite proof of the importance of calcium as an element of good health and as a safeguard against diseases. We were accustomed to consider calcium as having only a passive function in biology. Primarily calcium was supposed to enter only into the make-up of living beings as the chief component of their frame or of their protecting covers. Its presence was recognized in the bones, teeth, egg-shells, snail shells and all sea shells. That is, calcium was only found in those organs that had no direct connection with the active functions of life.

As medical science progressed, the physiologist and the clinician began to realize that calcium also was present in many of the circulating humors and that its part in many metabolic functions in health as well as in disease was an important one. Loewe divides therefore, the functions of calcium in "active" and "passive."

Since calcium has active functions in the living organism, it is natural that the wellbeing of the same will depend to a great extent, upon its ability to assimilate the required amount of calcium and that the deficiency of this element will cause more or less alteration in cell metabolism and, therefore, give rise to pathogenic manifestations.

It is my purpose to present in this paper some of the syndromes provoked by an insufficient calcium metabolism, from a clinician's standpoint.

First, let us consider what may cause calcium insufficiency in a normal individual. To my mind, there is only one etiologic factor to this condition, that is intoxication. I think the most important and probably the only active function

of calcium in the animal organism, is one of detoxication. Calcium is found in the circulating humors in an ionized form, and therefore it is easy to believe that this calcium ion combines readily with the toxins, this enabling the body to eliminate them. This property of combining with the toxins does not seem to be peculiar only to calcium, but I have reason to believe that it is common to all metals called alkali earths, especially magnesium and strontium.

Calcium is found in great quantities in the stool, urine and saliva, that is, in the excretory organs where a saprofitic intoxication (if the term be allowed), exists normally. All chronic intoxications, therefore, will produce a calcium insufficiency in the long run. At the beginning, the organism may be able to defend itself by drawing upon the passive forms of calcium, such as bone and teeth, which explains the bad teeth in pregnant and nursing women, in tuberculosis, in some metallic poisonings, and in fact, in any case of very strong or long-drawn-out intoxication.

Ferrier was the first to notice that a tuberculous patient when immersed in a swimming pool, would float easier than a normal individual. He concluded that the specific gravity of persons suffering with tuberculosis was diminished and attributed it to a loss of density in their skeleton. This observation enabled him to work out his famous treatment of recalcification, which has given so many good results in the treatment of the white plague, when properly applied.

It is true that some cases do not respond to it, but this is not a reason why it should be entirely given up, as seems to be the tendency in some institutions. The recalcification treatment in tuberculosis may fail if it is applied with ignorance of the factors contributing to its success.

The commonest syndrome of calcium insufficiency that comes to the physician's attention in his daily routine, is urticaria, which is nothing but an intoxication produced by a foreign protein. You all know the mechanism of anaphylaxis. These cases are cured very much more rapidly when calcium is given them in the proper way. Urticaria is sometimes called angioneurotic edema, which is a very bad term, the only thing true about it being the edema.

Edema of any kind is always the expression of a toxic condition of the tissues. According to Aldrich, edema is nothing but a hyperhydro-

sis, provoked by the presence of toxins in the tissues, lest the concentration of the poison becomes harmful to them. Edema is therefore a defensive reaction of the organism to keep the toxins in a diluted form. This, and nothing else, is edema in every case. The edema observed in poor circulation provoked by a failing heart is due, not to vascular stasis, as was formerly believed, but by the accumulation of toxins in the tissues, because the circulation is not active enough to carry them to their elimination. The same applies when the circulation is made difficult by any other cause, be it mechanical or otherwise. It will be understood as a result of the foregoing explanation, why edema is present in nephritis. Patients with edema improve on a milk diet, due merely to the richness of milk in calcium. This richness in calcium also explains its diuretic properties.

Since edema is a sign of intoxication and it may be general or local, we can try to outline a theory to explain how calcium works in tuberculosis. Although we think we possess a wealth of knowledge regarding the etiology and onset of tuberculosis, there are many points that we cannot explain. I will not endeavor to discuss whether the infection is exogenous or endogenous, whether we inhale, eat, drink, or suck the germ, but merely consider the disease clinically, and from the standpoint of calcium insufficiency. Every case of tuberculosis that comes under our observation gives a history of lessened resistance from childhood up, frequent colds, and constipation, alternating, in some cases with diarrhea, in other words a chronic auto-intoxication interspersed by many acute ones, and most of these located in the lungs. The auto-intoxication has already drawn sufficiently on the calcium reserves of the body. The repeated colds are pouring a certain amount of toxins into the lungs, as the neutralization of these toxins becomes more difficult with every new cold because the patient is poor in calcium. A condition of focal edema results, preparing an ideal soil for the Koch bacillus. As soon as the organism receives the attack of this new and more powerful toxin it tries to neutralize them by rushing all the calcium available and therefore, other intoxications are left unneutralized and the patient gets worse.

If we give calcium in sufficient quantities to take care of the requirements of the patient, the focal edema diminishes and may disappear and

the tuberculous bacillus finds the soil unfavorable for its development, its growth is hampered and the patient feels better. An interesting fact observed when giving calcium to a tuberculous person is that the profuse sweats peculiar to this disease diminish and finally disappear if the calcium administration is kept up. This fact alone would indicate that a powerful detoxication is occurring in the organism. I give all my tuberculosis patients great quantities of calcium from the first day I see them until they are discharged and gone to work. There never can be a danger of hypercalcemia because as I pointed out somewhere else the limit of calcium tolerance is very high and it only could be reached in case there was a hyperactivity of the parathyroid glands. When in the circulating fluid the amount of calcium is in excess of the needs of the organism the surplus is rapidly eliminated through the kidneys and intestines.

Tetany is another syndrome, the cause of which, laid for many years shrouded in the veil of mystery, until the clinicians started to see clearly. Finally after much speculation, it was supposed that tetany was nothing but an auto-intoxication, due to the inability of the organism to split and eliminate certain toxic substances formed in the intestines, guanidin especially. Later on, it was observed that the cases suffering from tetany showed very marked lowering of their serum calcium level, and that they would improve if calcium was introduced into their system. When the modern research on the endocrines permitted us to establish, with a relative degree of certainty, the peculiar functions of each of them, it was found that in tetany there was a condition of hypo-functions of the parathyroid glands. Sorensen and others could prove that the removal of the parathyroids in an animal would give rise to a typical tetany with a lowering of blood calcium. They also noticed that this condition was improved when calcium was administered, and that it was possible in this way to prolong the life of the parathyroidectomized animal. In the light of this research, it is now generally believed that the parathyroids play an important role in the metabolism of calcium. It also was noticed in these cases that there was an increased amount of guanidin present in the blood stream. As the calcium level increased the guanidin would decrease. This proves that the presence of calcium in circulation is needed for the elimination of guanidin.

This fact will be taken up later to prove the importance of calcium in the prevention of uremia and eclampsia.

The paramount symptom of tetany is convulsions. These are found in almost every acute poisoning. Spengler has shown that an injection of crotaline sufficient to produce a toxic effect similar to the bite of a rattlesnake would disclose a series of symptoms, all of which were traceable to a calcium insufficiency, similar to that found in tetany, low blood calcium level, and increase in coagulation time of the blood, all relieved by the administration of calcium.

Eclampsia also presents convulsions. I will attempt to explain the pathogenesis of this condition under the light of my theories. Although pregnancy should be considered as a physiological condition it is becoming, with the worries and the strain of modern life, a real pathologic state and should be managed accordingly, lest complications appear. We can consider pregnancy a chronic intoxication. The mother must take care of her own toxins and those of the fetus, which demand a great amount of calcium, to make their neutralization and elimination possible. Besides, she must supply the amount of calcium necessary to the building up of the fetal skeleton, therefore she has to draw on all her calcium reserves, when her food is improper, or her endocrines work deficiently. This is the reason for the frequency with which the teeth of pregnant women decay so easily. The bones also lose density. When sufficient calcium is not furnished to cover the requirements of the toxins, these concentrate in the tissues, and edema appears. Probably the first viscera to show edema are the kidneys; their functional activity is hampered which creates a vicious circle. The kidney insufficiency adds to the accumulation of toxins in the tissues. Edema appears in other organs. The constant irritation of the kidneys by the demands of the increasingly toxic body, produces a nephritis. Their functional capacity is lessened once more, albumin appears in the urine, chronic constipation very often makes the condition worse. Edema spreads to the liver, lowering the functional capacity of this organ, thus depriving the patient of another element of defense against the rising toxic tide. Edema keeps spreading and may reach the endocrines, including the parathyroids and eclampsia appears, with convulsions, generalized edema and high blood pressure.

If an injection of calcium chloride is given intravenously, the clinical picture takes a change for the better in a rather spectacular way. The renal function is immediately reestablished, as proven by a profuse diuresis, and the patient improves. If this treatment is kept up in conjunction with the usual administration of physics, cardiac sedatives and administration of water in large quantities, as well as application of heat to the body, the patient will recover.

There is no doubt that in eclamptic women, the guanidin is increased in the blood stream since an excess of guanidin is the first stage in the formation of creatinin the presence of which in great quantities, is always detected in severe cases of kidney insufficiency, the formula of creatinin corresponding to that of methyl guanidin acetic acid.

It has always puzzled me why calcium is not more widely recommended in eclampsia. To my mind this condition is merely due to calcium insufficiency, the degenerative lesions found in women that died from this condition in the liver and other viscera, are merely the result of cell intoxication and possibly of mechanical pressure, caused by edema. The good results obtained in eclampsia, following administration of magnesium sulphate, are due to the fact that this salt has some of the detoxicating properties of calcium, which I suspect is common to all alkali earths, as I said before. Although I am not an obstetrician, I make it a practice to give calcium to all pregnant women that ask my advice, and keep it up after labor, while they are nursing and I firmly believe that I have prevented thereby many cases of eclampsia, and saved many a set of pretty teeth.

Rickets may also be considered a condition due to calcium insufficiency, but in this disease many other factors, such as endocrine insufficiency, came under consideration. The ultra-violet rays, so widely recommended in this condition, do nothing more than stimulate the internal secretions and this is the reason for the good results observed from the use of actinotherapy, in this and other conditions, due to calcium insufficiency. This discussion of the relation of the endocrines to the utilization of calcium by the organism would carry me very far and therefore I will not touch on this subject in this paper. It is possible, however, that the parathyroids have a very close relation to calcium metabolism.

If I were going to pass in review all the pathologic conditions that can be traced to a deficiency of the calcium contents of the body, I would have to write a whole volume. But I think that the foregoing paragraphs give a complete picture of the subject.

How calcium combines with the toxins and favors their elimination is something that I will not try to explain. It is possible that calcium merely acts as a catalizer, or that by its combination with other elements a certain electric unbalance of the colloids is produced that may help the cell to get rid of the poison. It is possible that this action of calcium is merely exerted at the level of the kidney or it may take place in other organs and tissues. These are all problems to be worked out by the biochemist. One thing is sure, however, the action of calcium is materially increased if the patient is kept warm.

Calcium can be given by mouth or intravenously and in either case its administration is harmless. All the salts of calcium with the exception of the sulphate are readily absorbed. I generally use calcium lactate, lacto-phosphate or calcium chloride by mouth and calcium chloride in 10% solution intravenously, the average dose being 10 cc. The association of parathyroid gland in minute doses seems to increase its efficiency in some cases. Also the association with fluorine increases its absorption. The French authors recommend calcium fluoride therefor.

Before I finish I would like to give the following advice. When in doubt as to what to do for a patient, give calcium, any way, any amount. You will never regret it.

PHYSIOTHERAPY*

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The truly enormous strides made in the very recent past in physiotherapy have brought this branch of the profession to the alert attention of all engaged in the practice—and, justly so. It is no longer asked to justify itself, as was true up to a very short time ago. It has rightfully taken its place as an important branch of the healing art and science, not as an adjunct, at least no more than medicine is itself an adjunct to surgery, or vice versa, but as a separate

and distinctive branch. Any paper now presented, except within those bodies dealing exclusively with the subject, should be of a more or less general nature. It is the intention of this paper to deal somewhat generally with several of the more important modalities that constitute this branch of the science.

Perhaps before taking up individually any of the divisions, physiotherapy itself should be defined. No agreement has been reached as to a specific definition. It has been defined as the use of the physical means in contradistinction to the chemical ones in therapy. But, there is nothing to define the difference between the physical and the chemical—these often are one and the same, or at any rate they overlap. Perhaps it is better to call it "applied physics", referring to its application therapeutically. What it really is, is the application of the principles of engineering to the needs of therapy. This may seem far-fetched, but the man who denies the possibility of accomplishment along these lines, in order to remain consistent, must remove the lighting from his house, and the starter from his automobile. Although it has been more than difficult to persuade the more conservative members of our profession to believe it, it is wholly as logical to use these principles therapeutically as to use them in engineering.

In its very strictest analysis, many of the methods commonly used in general practice are actually physiotherapy. For instance, the effects produced by the internal administration of magnesium sulphate depend utterly upon a physical principle, or the law of osmotic pressures. This must then be physiotherapy, or the use of a physical means. Somewhat similarly, whenever a purely chemical agent is used, as in the case of drug therapy, the effect is the result of myriads of minute reactions between the agent used and the constituents of the bodily tissues. These reactions are electrical in nature, as is all of chemistry. This might class all drug therapy as electro-therapy. And if this is so, where would we classify surgical measures? Surely they are not chemical.

It is difficult to draw the line. In general, however, there is included in physiotherapy the use of the various physical energies, such as heat, light, and other vibratory energies, and mechanical and electrical energies. The term electrotherapy does not exactly properly apply,

*Read before the Hillsboro County Medical Society, Tampa.

since electricity is used usually only to produce the form of energy that is used therapeutically. We call it an electric light, yet in reality it is not an electric light, but a heat light—the mere passage of the current through the filament would produce no light, as witness the cord that feeds the fixture. Only the conversion of that energy into heat within the filament results in light. Similarly in physiotherapy electricity often is used to produce some other effect, which latter effect is used therapeutically.

This leads us to another and perhaps better definition of physiotherapy. It is the therapeutic application of definitely known and understood physical laws—laws that are just as immutable as the law of gravitation itself. No one is so foolish as to defy the law of gravitation. But on the other hand, no one points the derisive finger at the engineer who *applies* that law at Niagara Falls to the production of power. These laws that we use are not to be defied, but they can be put to useful work in undoing the handiwork of ever so many pathologies.

Probably first in importance among the various modalities employed is the use of the high frequency currents, or diathermia. In its basic principles this is really very simple. It consists merely of passing through the tissues an electrical energy of such factors that due to the tissues' resistance it will be converted into heat; at the same time using a current of such factor as will not be detected by the sensory elements in the tissues. This is making use of the law of the conservation of energy—no energy is ever lost, but any energy may be converted into another, or several other forms. To accomplish this in diathermia we simply alter the factors of an ordinary commercial current to suit our needs. We take a commercial current of 110 volts, about 6 amperes, and a frequency of 120 per second (of 60 cycles), and by the use of an oil immersed transformer step up the voltage to as high as 50,000 volts, and step down the amperage to a mere fraction of an ampere, measured in milliamperes, or thousandths of an ampere; and then by means of a set of condensers and a spark gap mechanism, step up the frequency to as high as 1,850,000 alternations, or oscillations per second. We now have a current of sufficient voltage or pressure to assure its passage through any tissues we desire to treat, even including highly resistant bone, and of so

low an amperage as not to be destructive of the tissues, and of so high a frequency as not to be felt by the tissues. That is, with a frequency so extremely fast, before the nerve end can sense the one impulse, another of opposite polarity has come through and neutralized it.

Of course, it has been known throughout the history of the practice that heat is one of the most effectual of remedial agents. The difficulty has been to get the heat where it was needed—or to the pathology. Surface heat, as applied by the hot water bottle for instance, has been extremely limited in its field of usefulness, for the simple reason that far more pathologies arise in the deeper tissues of lung, liver, kidney, prostate, etc., than in the surface tissues. By the use of this form of electric energy we are able to heat any and all tissues, indeed even the entire body at once. Of course it is necessary to be equipped with apparatus that has the capacity to perform these functions—one would not attempt to replace a locomotive with a Ford car. Similarly, one should not expect of a tiny table model of apparatus the same results obtainable with a huge device ten times the size.

It has been said that it is not electricity that does the work in diathermia, but the heat. Perhaps we can go further and say that it is not the heat, but some of the effects and results of the heat. The heat alone would do no good, as witness that diathermia through dead tissues in the cadaver leaves them as they were. The actual benefit is achieved by a series of natural reactions that are set up by the heat as an agent. An intense hyperemia is chief among these. An active hyperemia, nothing like a Bier's hyperemia, but an active flowing hyperemia, arterial, capillary, venous, and lymphatic—and actual flooding of the area being treated. And not only is this in greater volume, but it is greater in activity, the heat being a decided stimulus, for instance, to phagocytic activity. We not only bring more phagocytes to an area, but each one that we bring is an activated one, with a relatively high opsonic index, due to the heat.

Along with all this comes, as other effects of the heat, an activation of both local and general metabolism, stimulation of enzymatic reactions, absorption of serous exudates, softening of more organized ones, relaxation of the tissues, control of pain as a symptom, and destruction, or at least attenuation of bacterial in-

vasion. And let us not lose sight of the fact that all this takes place at the actual site of the pathology, not on the surface at some point distant from the site of the trouble.

There is an additional effect of diathermia that has not yet been definitely explained. It has been called, for want of a better name, a fibro-lytic or fibro-solvent effect. I would not say that it can actually dissolve fibrous tissue. There is a connotation to the term that we do not like, perhaps because of its too frequent use in connection with calculi. We do not dissolve gall stones with snake oil, and probably we do not dissolve abnormal fibrous deposits with diathermia. We don't exactly know just what we do do with them, except that we are pretty sure that we markedly influence them, and cause them to break down, soften, and to some extent, at least, to disappear. Theories have been advanced to explain this action, some of them comparing the effect of the current to that of natural lightning on an oak tree that gets in its way, and this may be plausible inasmuch as the diathermic current is actually a continuous series of condenser discharges. I will not burden you, however, with what has not yet been definitely proven. The fact that we do decidedly influence these deposits in chronic pathologies is a matter of record.

It will be seen by those who have been closely following the enumeration of the various effects of this modality that it becomes useful in both acute and chronic pathologies—certain of the effects being useful in the one, certain others in the other. In order to make clearer to you some of these uses of the current, it would be well to go over some reviews in physiology and pathology. Nature's reactions to disease have been classified as adequate, inadequate, and excessive. We have thrown out the latter, classifying all of them as inadequacies. A study of specimens of the two reveals that the chief point of difference between them is the absence of a hyperemia in the one and an abundance of hyperemia in the other—where there is a really abundant hyperemia as a reaction the pathology is likely to be short-lived, and where there is either an actual ischemia, or a relative insufficiency of the hyperemia, the process is likely to become chronic. Perhaps good examples would be a typical pneumonic reaction in a healthy subject, readily recovering; and a typical "white abscess" of tuberculosis. It becomes

highly interesting to consider the possibility of converting, artificially, the one sort of reaction into the other. This actually can be done. And in those cases where, left alone, nature would have reached adequacy anyway, we can greatly hasten the point where this is accomplished. For instance, pneumonia treated this way becomes adequate very early, and there is a total absence of the so-called crisis, the disease terminating after from two to six treatments by lysis. This is actually the conversion of inadequacy into adequacy, for as a matter of fact any reaction remains inadequate until adequacy is established—and in pneumonia this does not occur until the time of the resolution.

Similarly, many acute pathologies respond satisfactorily to this method. This statement is not limited to these of bacterial origin, for the traumatisms respond nicely, too. Those cases where a stasis has developed because of an injury, as in sprain, fracture, or effusion into a joint are greatly benefited by the early application of this method. Active circulation is re-established, drainage occurs, the pain is greatly relieved, and oftentimes such a condition as an effusion into a knee-joint, for instance, is prevented from becoming chronic.

In large numbers of chronic conditions one or another or several of the effects of diathermia are useful. A class of these conditions is illustrated by chronic osteomyelitis. It may be interesting to you to know that it was in this condition that the real effectiveness of this method was first brought to the attention of the profession. This condition was prevalent among those soldiers returned from France with bone injuries—in fact almost all of them were chronically infected. Diathermia succeeded in closing large numbers of these wounds with their necrotic bone, open sinuses and exuberant granulations where ordinary orthopedic methods had failed. And it took usually something less than three months, even where more than that many years had elapsed without success with the older methods of the orthopedist.

Probably the one greatest field for diathermia is in those chronic disorders which are deponent in their basic pathology upon the gradual deposit within the tissues of abnormal fibrous tissue. They are exemplified by such conditions as Bright's disease, cirrhosis of the liver, chronic prostatitis, true angina pectoris, etc. It is probably a vicious circle at work in these and similar

conditions. Due to some stimulus of an abnormal nature, natural parenchyma cells are destroyed; nature replaces them with fibrous deposits, which organize, and in doing so contract, as does fibrous tissue anywhere. In this contraction, some or all of the blood supply to adjacent normal tissue cells is shut off, and they in turn succumb. They, too, are replaced by additional fibrous tissue which contracts as it organizes, and the process goes on. This is probably a pretty accurate picture of what is going on in even a normal kidney, for, after all, this process is nothing more or less than the process of growing old. If one should ask you to state what the difference is, essentially, between a new-born babe and an elderly gentleman of, say, 90 years, you would almost have to say, "fibrosis." None, in the babe. Instead, an incomparable elasticity uniformly distributed. Even the bones are not yet ossified. In the elderly gentleman, much, everywhere. The skin wrinkled, and the liver hob-nailed. It is fibrosis. It is old age. By the expression "growing old gracefully" is probably meant the process of fibrosis quite uniformly distributed throughout the organism, no unit having proceeded further along than any other, but we do not often see it that way. It is more usual for a kidney, a liver, a lenticulo-striate artery or a coronary, or a prostate gland to get ahead of the other tissues in this process, and then we have, I believe, the typical lesions that have been mentioned—Bright's disease, etc.

Aside from the therapeutic use of diathermia in these conditions it is interesting to consider the prophylactic use as well. It seems wholly logical that if this current will take a cirrhosis, for instance, where manyappings have been done—paracentesis abdominalis—and render it entirely unnecessary to tap any more; or a nephritis after uremia has developed, and bring about a condition in kidney function approaching normal, that it might act very satisfactorily as a prophylactic measure. What this is really doing is not preventing the deposit of fibrous tissue, probably, but disseminating the smaller deposits of it that are present before symptoms are presented. I know one doctor who has been doing this for a number of years on his parents in the hope of prolonging useful life and making the later years more enjoyable. Separate technique are given through the brain, the heart, the liver, the kidneys, and in the male the prostate.

Probably the next most important modality in

physiotherapy is ultra-violet energy. This is a vibratory energy whose natural source is the sun. Artificially any electric arc produces this form of energy. The difference in the various forms of vibratory energies seems to lie in their wave lengths or frequencies—the rapidity of the vibrations. This difference gives very definite characteristics to the energies of differing wave lengths. In order to get a basic understanding of this form of energy, we must first realize that the energy that is emitted by the sun, immense as it is, is in the form of ions of matter travelling in an oscillating manner through space, zigzagging, as it were, but with different rates of change of their direction. Part of it comes in huge long jumps, part of it in tiny steps so small as to stagger the imagination. The wave length of a band of energy is the linear distance covered by that wave in two of its steps, or its zig and its zag, if you will permit me. It is the distance between the peak of one wave and the peak of the next one on the same side of the neutral or center line. Now, in spite of this difference of wave length, or frequency of change of direction, all of this energy travels through space at exactly the same velocity—or the speed of light, or 186,000 miles per second. It is simply that the shorter wave length groups take more steps to keep up—if you will imagine a very tall man, with his small son walking together, you may get a better picture of the phenomenon.

If this energy is passed through a prism the refracted light will present itself as the spectrum, or rainbow, with which you are familiar. The long wave lengths will be, arbitrarily, on the left end, the shorter ones on the right. Within the field that is visible to the human eye these arrange themselves from left to right as red, orange, yellow, green, blue, indigo, violet—from longest to shortest. But the part of the whole that is visible to human vision is a very small portion. To the left are far longer waves, and to the right far shorter ones. To the extreme left these are measured in meters and thousands of meters—the radio waves. Perhaps, and probably there are still longer ones than these with which we are not yet familiar. Within the field just to the left of the visible, or the infra-red field, these waves are too short to be measured by any ordinary standard, and a unit is used first suggested by the Swedish Scientist, Angstrom, and named for him. An Ang-

strom unit is a one ten-millionth ($1/10,000,000$) of a millimeter, and a millimeter is about the thickness of a badly worn ten-cent piece. The infra-red field extends from about 15,000 A-units down to 7,700, which is the beginning of the visible field, or the red rays. The visible field extends over to 4,000 or the shortest of the violets. From here on to 1849 A-units is found the ultra-violet field, divided for convenience into near, far, and extreme bands. Beyond this is a rather large group still unexplored (never produced artificially, and not reaching the earth from the sun), and beyond these successively the X-rays, the three bands of therays of radium, and the newly discovered "cosmic" rays of Milliken.

When the rays of the natural sun are used therapeutically it is called heliotherapy. There are numerous difficulties in the way of the heliotherapist. Undoubtedly he has accomplished great good in many conditions, as most notably the work of Rollier in Switzerland (Leysin) in the treatment of extra-pulmonary tuberculosis in children. But it is against great odds that he works. In the first place the sun doesn't always shine (excepting possibly in Miami), and then when it does it is with varying intensities with differences in the season, in the weather, the altitude, the immediate location, etc. This particular band of energy is exceedingly fragile or weak, and cannot penetrate fog or haze, or the murky atmosphere near to cities. The matter of dosage becomes largely guess-work, and the continuity of treatment is well-nigh impossible.

Artificially this form of energy is produced therapeutically by an apparatus consisting of a quartz tube pumped to a vacuum, and partially filled with mercury, through which there is made to pass an electric arc of an intensity of about 90 volts. Quartz is used for two reasons, first because it is the only material available through which the feeble energy can pass, once generated—glass stops it as effectually as lead stops the X-ray—and second, because it withstands the terrible heat at which the arc is operated—it has a co-efficient of expansion of almost zero, the lowest known in physics. Thus produced this energy becomes available to the physician with no considerable factors of variation. And the apparatus is now so well standardized as to give very little concern to the operator. There are two types of the apparatus, an air-cooled and a water-cooled, but the latter is simply to permit the patient's skin to approach closer to the source

of the energy than it could to the air-cooled burner on account of the heat. In the water-cooled model the heat is carried away by the water and the skin may almost touch the burner and get the very shortest of waves, which in the other model are filtered out by the air before they can reach the skin at a safe distance. It is thought that a single millimeter of air will filter out all waves of 1849 A-unit length; and the shortest ray ever recorded as having reached the earth from the natural sun is of 2,910 A-units.

In considering the therapeutic application of this energy it is interesting to note that in recent years much attention has been drawn to the so-called vitamins. The information about them still is anything but definite. One thing is certain, however, and that is that there is a relation between the so-called anti-rachitic vitamin or Vitamine-D, and this ultra-violet energy of which we are speaking, so close that it is quite within reason to consider them as one and the same. Scientists have studied all food products with every known method of investigation to determine what might be this mysterious "substance"—or vitamin. And now it appears that it is not a substance at all, but a form of energy—*this* form of energy. It cannot be detected by ordinary methods or analysis any more than can the life within an animal form, by a chemical analysis of the carcass. This energy has the capacity for remaining active for varying periods of time within certain suitable substances. Notable among these are the fat globules of cod liver oil, and olive oil, certain phosphorescent salts, certain compounds as mercurochrome, and the cholesterin of the red blood cell. The property of a substance to hold for a time this energy, and to yield it is called radio-activity. Cod liver oil holds large quantities and yields it slowly, accounting for its successful use over the decades in the treatment of rhachitis. Olive oil, on the other hand, holds a much lesser quantity, and gives it up more quickly. However, olive oil naturally contains none of it. Artificially activated, and administered soon after the activation, it is just as successful in rickets as is the cod liver oil.

All of these considerations are important, not only from the standpoint of physiology, and pure science, but from that of therapeutics as well. It must be that an energy so all important in the realm of nature herself as is this vitamin energy is useful also in the treatment of disease. Indeed, without it in nature there could be no

health, no life. It is, more nearly than anything yet defined by science, the actual source of all life.

Among the therapeutic effects to be achieved by the use of this energy artificially applied by the quartz mercury burner are these. It increases the natural radio-activity of the blood stream. It adds to the already available supply in the red cells enough to overcome some disordered conditions, with no further assistance. It stimulates endocrine production, and hormone and enzyme reactions. It greatly increases the manufacture of red blood cells—in fact more rapidly than any known agency. Pernicious anemia has responded more quickly and completely to it than to any other technic. Similarly hemophylia has been benefitted. It increases oxidation and elimination, and markedly influences general metabolism. It is a powerful agent in the various toxemias such as that of pregnancy, septicemia, etc. It oxidizes the toxic elements and renders them inert. It increases the viscosity of the blood stream. It stabilizes or balances metabolism. A French experiment proved that the identical dosage would uniformly reduce weight in obese women, and add weight to spare ones. It markedly stimulates both calcium and phosphorus metabolism—controlling rickets more effectively and more pleasantly than the older method. It is decidedly bactericidal, in fact, to organism directly exposed to its short wave lengths, it is the most powerful germicide known. The Bureau of Standards found something like a single second to be lethal to all organisms directly exposed at six inches from the air-cooled burner. It improves the nutrition of the skin. In large doses, sufficient to produce an actual erythema of varying degrees, it has much the same effect as diathermia does more deeply within the tissues, and thus clears up many skin conditions, some of which respond to no other method satisfactorily. In conjunction with diathermia and minute or ionizing doses of X-ray it has cleared up many cases of X-ray burn—so-called. An X-ray burn is not a burn at all, but first an ischemia, and later a fibrosis resulting therefrom.

Many infants who refuse to accept no matter what change in the formula of artificial feeding, will accept almost any formula if exposed a few minutes a day to this energy. Adults with certain gastric dyscrasias respond nicely to similar radiation, cases actually diagnosed as gastric ulcer having cleared up nicely under a master-

ful first dose, followed by routine tonic radiation. Any wound heals more rapidly under the gentle influence of this agent, and infections in wounds thus treated have been reduced to less than one-quarter of those in wounds not thus treated. A keloid has never been known to develop in a wound so treated, and there is one case recorded where this condition had recurred following three removals, whereas no recurrence followed the fourth removal, which was itself followed by generous application of ultra-violet radiation. This method is specific in extra-pulmonary tuberculosis. Lawrason Brown of Saranac Lake, N. Y., speaking of its use in these conditions, says "The results are so amazing as to place the entire burden of proof on the skeptic." It is a very useful adjuvant in the care of pulmonary tuberculosis, not the least of its triumphs being the fact that in cases thus treated extra-pulmonary lesions very seldom occur—the intestinal and peritoneal forms, never. The older operative method in peritoneal tuberculosis can be dispensed with when one of these lamps is available. Every pneumonia, and any other condition in which a toxemia is one of the outstanding dangers, should have liberal quantities of this radiation. And many cases of an infection of unknown source, but of unmistakable symptoms are cleared up by it, without even finding the source. Every pregnant mother should have it routinely, especially in the latter months of the gestation, in order to protect her own calcium metabolism, and to develop that of the foetus, and to prevent the toxemia of pregnancy and the renal disorders that so often accompany this condition.

In ionizing doses of X-ray we have a very useful adjunct to both diathermia and ultra-violet energy, in the treatment of certain conditions. By an ionizing dose is meant a minimum dose of only the softest or longest of the X-ray—rays from about 12 down to about 8 A-units. The dose is given with these factors, for those who might be technically interested; a spark gap of from $3\frac{1}{2}$ to 5 inches, a skin-target distance of about 10 inches, a filter of 1 or 2 millimeters of aluminum, and a current through the tube of 1 milliamperere for 5 minutes or 5 milliamperes for 1 minute—5 milliamperere minutes of dose. This, of course, to the mind of a trained X-ray man, accustomed to much larger doses in therapy, and to heavier factors in radiography, appears almost ridiculous. Perhaps it is homeopathy as applied to X-ray. Whatever it is, it makes possible the achievement of some results that cannot other-

wise be gotten. In any condition being treated by diathermia in which the fibrosis previously mentioned is pronounced the addition of this dose once or twice a week reduces by almost half the time required for a result, and in some cases, as notably the X-ray burn, the result cannot be had without it. Similarly in those skin conditions characterized by a more or less marked keratosis, as against the X-ray keratosis of the backs of the hands, and psoriasis and ichthyosis, the ultra-violet alone, used as it is in these cases, up to an actual blister dose, either does not wholly remove the pathology, or if it does so, does so very slowly. Whereas the addition of this feeble dose of X-ray twice a week very much speeds up the ultimate recovery. Undoubtedly the effect of the X-ray in these instances is through an action similar to the action of the diathermic current previously described as its "fibro-lytic" action. Whatever the physics, and the metaphysics of it, its therapeutics is altogether undeniable.

In static electricity, as produced by the revolving plate generator, a rather formidable machine, and somewhat temperamental, to say the least, we have another very valuable addition to our armamentarium. Static energy, as generated by this device is altogether similar to natural lightning, except in the matter of volume. It is a condenser discharge, the machine being a self-charging condenser, which stores up its capacity to a pressure of about a million volts and then releases it so that it is measured by the 1/26,000th part of a second. Applying this therapeutically either through a metal plate placed on the skin, or directly as direct sparks to the skin, there is produced a mechanical effect in the tissues that is not to be duplicated by any other agency. The contraction that takes place is intense, almost painless (quite so in many cases), and it involves not only the usually contracting muscle tissue, but all the tissues with the sole exception of the bone. The result is a massage that cannot be duplicated by any fingers however adept, and a decongestion of the tissues that otherwise requires much more time to bring about. This modality is usually used as an adjunct to diathermia, and invariably follows the latter in the sequence. Many diathermia treatments are immediately followed by this modality in order to assure the ultimate cells of receiving the augmented blood supply brought to the part

by the diathermia, instead of permitting it merely to pass through the part. The deep and intense massage, of the liver for instance, assures a more complete evacuation of each individual cell of its waste matter, and a more complete assimilation of the new elements brought in in the new hyperemia. There is also a fibro-lytic effect to the static without which certain very resistant fibrous pathologies cannot be successfully handled—as for instance *tabes dorsalis*, or locomotor ataxia. But even in simpler conditions it hastens the recovery. It is especially useful in the traumas, as sprain and contusion, and in the effusions into a joint, as in the knee. It very greatly reduces the period of incapacity in these conditions. Applied in a slightly different way, as an effluve, or the so-called brush discharge, it has an effect quite similar, except entirely superficial. For instance the echymosis commonly known as a black-eye, if treated soon after it has been incurred can be entirely removed in one sitting by this method. A few hours later it will require several sittings, and two days later it may as well not be attempted, unless the victim is an actor, preacher or what not to whom the contusion is exceedingly embarrassing. Then the brush discharge should be preceded by liberally heating the area with the diathermic current applied through a glass non-vacuum electrode.

In infra-red radiation, or in radiation with the ordinary incandescent bulb of high wattage, we have an agent which is very useful, but in a limited number of pathologies. Its effects are largely similar to those of diathermia, except that it lacks the penetrative qualities. Where the pathology lies very superficially there is a pronounced effect in this type of radiation. And even in pneumonia where diathermia was not available, the infra-red generator has been of great help. In certain cases of skin disorders, as notably psoriasis, this agent is used liberally to heat the area to be treated by the ultra-violet water-cooled lamp, in order to assure a deeper reaction and a greater likelihood of a result.

In the low volt currents of galvanism and sinusoidal we have also very useful modalities, but also applicable to a lesser number of pathologies. Yet, they are all-important where they are applicable, and in some instances are not to be replaced by any other known means. By galvanism we simply mean a simple electrical

current flowing evenly and uniformly in one direction. Applied to the surface of the body with two electrodes, or within the accessible cavities it produces two chemical effects, opposite to each other in nature, at the two poles. The tissues beneath the positive or plus pole develop acidity, collect oxygen, become vaso-constricted and dry and hard and dehydrated and antiseptic. While those under the negative or minus pole become alkaline, collect hydrogen, become vaso-dilated, and moist and soft and hydrated, and an excellent field for sepsis. Many of the conditions formerly treated by galvanism are now better handled by the newer means of diathermia or the other modalities. Yet there still is a large place for galvanism in gynecology—particularly the positive pole in vagina and uterus. And there is no better method of treating a male urethral stricture, annular in type, than with the negative pole of galvanism, applied with a specially made insulated bougie.

If this simple galvanic current of low pressure is caused mechanically to charge its polarity rhythmically, one pole being first positive and then the same pole negative, at a rate of from 10 to 120 per minute (not per second, as in the case of the commercial 60-cycle current), we have what we call sinusoidal current—slow sinusoidal, or surging, it is sometimes called, or rapid sinusoidal, as the case may be. These currents are exceedingly valuable where we desire artificially to stimulate muscular contractions for the purpose of exercise, but where we desire also to avoid the chemical polar effect of straight galvanism. Any amount of exercise may thus be given with no polar effects whatever, because whatever effect the one pole may lay down is immediately and exactly neutralized by the other. This has proved particularly valuable in the paralysis following nerve injury or infection, as in the war-wounded, and in Bell's palsy, etc. The artificial exercise retains the tone of the muscle and makes it more readily accept the first returning feeble nerve impulses. Probably, however, the most generally useful application of this modality is in the artificial exercise of the great colon in chronic obstipation. How general is this condition is probably only too poorly known. But after the fad of considering the teeth and the tonsils as guilty in every case of focal infection has had its swing, we probably will turn, and much more logically to the large intestine, with its enormous absorptive area and

its huge mass of material from which to absorb. Numberless cases now, of everything from a mere suggestion of an arthritis in the wrist to an actual toxic psychosis with suicidal intent have been nicely cleared up and completely, too, by this simple expedient. The application is one of the simplest in all physiotherapy, and the results probably among the most outstanding. One electrode is placed over the lower dorsal and lumbar nerve roots posteriorly, and the other moved about over the abdomen, following the outline of the colon, allowing a few contractions at each position the first day, a few more on successive days and so on. Thus the splanchnic area is exercised and taught to take care of itself, and the result usually is a very regular and complete natural evacuation. Body baths of ultra-violet energy are helpful to these individuals, as there is usually quite some loss of elasticity in their tissues, and the stimulation of endocrines thus brought about tends to tighten this up, and improve tone, in general. These often carry a sub-normal blood pressure, and this, too, is improved by its sequence.

Probably in a few years, after the profession becomes better acquainted with the utter simplicity of these comparatively new methods and realizes the wholly logical reason in their application, and after the period of reaction to a new thing has passed, they will come into more general use. We have only to look back a little way to see the use of X-rays condemned as the idle device of a tinkerer. And now the courts grant redress for malpractice for their non-use in certain types of cases. History is probably in the act of repeating itself in the case of physiotherapy. Let us at least keep our minds open and ready to accept whatever method, and by whomsoever sponsored, provided only that it can be shown to be an improvement over the present standard, and to achieve in whatever degree the ultimate aim of our brotherhood—the relief of the patient.

ACUTE DIFFUSE GLOSSITIS*

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In a multitude of diseases the tongue has held an important place in the interest of clinicians for many years, and has furnished a fascinating

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field for conversation more particularly with the laity in discussing imaginary, as well as real, diseases. But it is seldom we are confronted with a serious idiopathic malady of the tongue.

For obvious reasons I'm not going to attempt a discussion of the various conditions of the tongue associated with or those the result of other diseases, but simply report four cases with a condition not preceded or occasioned by any other disease or traumatism.

In each of these cases there was an inflammatory diffuse swelling of the tongue that developed rapidly, attended by severe pain, salivation, enlargement of neighboring glands and fever. The swelling in three cases extended down on chest to a level of fifth rib, articulation and swallowing practically impossible.

CASE No. 1.—Mrs. S., age 45:

Mother of several children, no still-born, no miscarriages. Previous illness since childhood consisted of several short attacks of malarial fever and one attack of influenza in 1918, lasting two weeks. Present illness. Case first seen January 15, 1927, about 5 p. m.

In conversation with Dr. Dowling before reaching this patient he stated to me that he had previously seen two cases affected similarly and both died. This woman was apparently well until some time during the night of January 14, when mouth became sore and inflamed, and next morning Dr. Dowling was called. Found her very restless, temperature 103, tongue inflamed and swollen several times its normal size, complaining of severe pain, both of mouth and epigastric region. During afternoon condition was practically the same but patient was able to swallow a little water but unable to articulate. Dr. Dowling was of the opinion her condition was somewhat improved as that morning swallowing was impossible. January 16, mouth condition very much improved but decided symptoms of influenza had set in which ran a fairly smooth course for ten days and patient recovered.

CASE No. 2.—M. R., colored woman, age 47:
Previous illness without interest.

First seen February 12, 10 a. m.

As patient was unable to talk husband informed me that the day before she became salivated and her condition had grown worse rapidly. After careful inquiry as to kind and amount of medicine that produced this condition

it was revealed that she had taken no medicine at all before onset of trouble. Examination: Temperature, 104; pulse too rapid to count; respiration labored, anxious expression; continually pointing first to mouth and then to epigastric region; tongue swollen several times its normal size; protruding out of mouth about half inch and so thick it was impossible to get an applicator between it and the roof. Saliva was flowing freely all down front of her dress. The swelling was very marked on both sides of her jaws, extending down on chest. February 13, 1927, swelling of tongue had subsided enough for mouth to be closed; mouth and tongue dry. Patient in a comatose condition and died February 15.

CASE No. 3.—E. P., colored woman, age 39:

First seen February 16, 9 a. m.

Well-nourished and up to present illness had always enjoyed good health, she was in the eighth month of her sixth pregnancy, and lived about one mile from Case No. 2; admitted she visited Case No. 2 during first of her (Case No. 2's) illness. Her husband stated that she was awakened that morning with pain in her mouth and stomach and condition had grown worse rapidly. Temperature, 101; pulse, 140; saliva flowing freely from mouth, tongue swollen so that articulation and swallowing impossible for past two hours. She was walking the floor throwing hands over head, pointing to mouth and epigastric region. February 17, mouth condition very much better, could talk and swallow fairly well and seemed very grateful for the improvement, but the pain in abdomen was very much worse, showing that labor had set in. She was delivered that night and died a few hours afterwards. The mid-wife stated there was no hemorrhage.

CASE No. 4.—Colored girl, age 15:

A relative and living near case No. 2. First seen February 16. Previous history without interest. She stated that about two hours before I saw her her mouth and tongue commenced to hurt. Examination: Temperature, normal; pulse, 130; tongue swollen; mouth inflamed but no evidence of pain in abdomen. I gave her tongue and mouth a thorough scrubbing with a paste of perborate of soda and the next day condition very much improved, complete recovery in two or three days.



Tampa Bay Hotel—Convention Headquarters

TAMPA THE NEXT MEETING PLACE OF THE FLORIDA MEDICAL ASSOCIATION

Tampa is both a commercial and a tourist center as illustrated by its handsome hotels and large commercial industries. Like most sea-



A Scene Along Hillsboro River and a Part of Plant Park

coast towns it has a mixed population due largely to its being a shipping center for the South American countries.

Tampa is one of Florida's oldest cities and with its broad streets and good roads leading in all directions is an easy city to visit, because of the absence of motor traffic jams so often seen in many of our cities where streets are narrow.

It is worth a visit to Tampa to visit historic Tampa Bay Hotel, owned by the City of Tampa. This Hotel was built by Mr. Plant when Tampa was a small village. The Tampa Bay Hotel

will be headquarters for the Convention and is reached by travelling west on Lafayette, across Hillsborough River and its spires can be seen peering through the tree tops to the right in beautiful Plant Park.

The Tampa Municipal Auditorium where the general sessions will be held is likewise located in Plant Park. This obviates the necessity of going a long distance from headquarters to the Convention Hall, making the arrangements most ideal for holding a convention.

To see the city one should drive out Bayshore Boulevard where the residential section is located. Davis Islands can be seen and reached from the driveway over a bridge connecting the island with the mainland.

To visit the downtown section one may traverse Franklin, Tampa and Florida Avenue.



Palma Ceia Golf Club House



Bayshore Royal Hotel



Floridan Hotel



Tampa Terrace Hotel



Mirasol Hotel



Hillsboro Hotel



Olive Hotel



Tampa's Municipal Auditorium Where the General Sessions Will Be Held.

Ybor City, a typical Spanish atmosphere with many Spanish restaurants may be reached by travelling east on Seventh Avenue from the downtown section. All kinds of amusements

can be had in the city embracing the outdoor sports, such as baseball, swimming, boating, golf, polo, trap-shooting and fishing. Any of the visitors wishing to participate in any of these



A Bird's-eye View of One of Tampa's Main Streets Looking West Along Lafayette Street.



Bayshore Boulevard Drive. This Drive is Five Miles Long and Skirts Hillsboro Bay.

sports can get all information desired from the Committee on Entertainment.

Tampa's largest industry is its cigar manufacturing. These factories produced four hundred, eighty-three million cigars last year. Passes may be obtained from the committee on entertainment to visit these factories.

Tampa's wholesale and retail districts are increasing each year. This is evident because Tampa is the center of a hundred mile radius, embracing one-third of the population of the State.

We hope all the visitors will visit the Tampa Municipal Hospital. This building is the last word in modern hospital construction, and we have arranged for clinics in this building and we hope all will avail themselves of this opportunity.

Tampa offers both men and women an exclusive shopping center for the discriminating individual. The Spanish shops you will find exceedingly interesting and exclusive.

Tampa also affords opportunity of visiting the many places where food will be served in Spanish, Cuban, Chinese and the good old American style.

Tampa extends to all the doctors and their wives a special invitation to visit here and you will find Tampa will and can furnish the great-

est variety of entertainment of any city in the South.

It has been ten years since Tampa has had the pleasure of entertaining the medical profession of the state and every effort will be made by all the departments of the City Government and various civic organizations of both men and women to see that your stay here will be all and more than you expect.

Tampa wants you to come and be with us.



A Scene in Plant Park

PROGRAM

of the
FIFTY-FIFTH ANNUAL MEETING
of the
FLORIDA MEDICAL ASSOCIATION, Inc.
TO BE HELD AT TAMPA, FLORIDA
APRIL 3rd and 4th, 1928

INFORMATION.

Information desk will be located in the lobby of the Tampa Bay Hotel with continuous service throughout the meeting. All members will be required to register and secure identification badges before attending any of the sessions. Guests and ladies are requested to register. Tickets for the banquet, Tuesday, April 3rd, may be obtained at the registration desk.

PROGRAM OF ENTERTAINMENT.

Monday, April 2nd.

- 9:00 a. m. Clinics.
12:00 a. m. Tampa Municipal Hospital.
1:00 p. m. and continuing throughout session
Golf Tournament—Palma Ceia Golf Club.
8:30 p. m. Informal Smoker—Pagoda Club, 512
Howard Avenue.

Tuesday, April 3rd.

- 8:30 p. m. Annual Banquet, Tampa Bay Hotel
(\$3.00 cover charge).
ENTERTAINMENT FOR LADIES.
Monday, April 2nd.
8:00 p. m. Opera—"The Marriage of Figaro," presented by The Thallians. Followed by reception. Federated Club and Friday Musical Building.
Tuesday, April 3rd.
10:00 a. m. General Session—Municipal Auditorium.
1:00 p. m. Spanish Breakfast—Plaza Cafe.
3:00 p. m. Meeting Woman's Auxiliary. Federated Club and Friday Morning Musical Building.
8:00 p. m. Annual Banquet, Tampa Bay Hotel
(cover charge \$3.00).

HOTELS.

Bay View	\$2.50 to \$4.00
Bayshore Royal	\$2.50 to \$5.00
Biscayne	\$2.00 to \$3.00
DeSoto	\$2.50 to \$3.50
Detroit	\$1.50 to \$2.50
Florian	\$2.50 to \$4.00
Hillsboro	\$2.50 to \$4.00
Hyde Park	\$1.50 to \$2.50
Olive	\$2.50 to \$3.50
Puritan	\$3.00
Palmerin	\$2.50 to \$5.00
Tampa Terrace	\$3.00 to \$5.00
Mirasol	\$3.00 to \$7.00
Tampa Bay (American Plan)	\$6.00

COMMERCIAL EXHIBITS.

Commercial exhibits will be located in booths in the Gold Room of the Tampa Bay Hotel.

The Commercial Exhibits have a real scientific value and physicians who wish to keep abreast of the times and know the latest in drugs and medical appliances should spend some time with these exhibits. It will be surprising the great amount of useful information that can be procured at these exhibits. Many have nothing for sale, the representatives of the firms being there to give the latest information regarding their products. Those who have items for sale will gladly give information whether there is a purchase or not. *Be sure to visit the Commercial Exhibits.*

LOCAL COMMITTEE ON ARRANGEMENTS.

H. Mason Smith, Chairman
J. S. Helms
J. Brown Farrior
George L. Cook
James L. Estes

RECEPTION COMMITTEE.

R. Jefferson, Chairman
Sheldon Stringer
J. C. Dickinson
J. W. Taylor
R. R. Duke
Douglas Meighen
B. E. Nelken
Wm. Blake
E. W. Bitzer
C. A. Andrews

COMMERCIAL AND SCIENTIFIC EXHIBIT COMMITTEE.

A. C. Ives, Chairman
Earl McRae
W. M. Rowlett
R. A. Ely
W. P. Adamson

LADIES' COMMITTEES.

ARRANGEMENTS.

Mrs. C. R. Marney, Chairman
Mrs. L. B. Mitchell
Mrs. L. J. Eford
Mrs. J. S. Helms
Mrs. J. C. Dickinson

RECEPTION.

Mrs. Wm. Rowlett, Chairman
Mrs. Mason Smith
Mrs. E. W. Bitzer
Mrs. J. B. Farrior
Mrs. R. A. Ely
Mrs. R. R. Duke
Mrs. J. W. Taylor
Mrs. R. P. Henderson
Mrs. George L. Cook

BANQUET.

Mrs. E. S. Gilmer, Chairman
Mrs. W. C. Blake
Mrs. Edward Smoak
Mrs. A. M. Bidwell
Mrs. Robert Nelson

FIRST GENERAL SESSION.

MUNICIPAL AUDITORIUM.

APRIL 3RD, 10 A. M.

Call to order, H. Mason Smith, Chairman of Committee on Local Arrangements.
Invocation, Reverend Howard J. Brazelton, Pastor, First Christian Church.
Address of Welcome on Behalf of Hillsboro County Medical Society, R. C. Hubbard, President.
Address of Welcome on Behalf of City of Tampa, Honorable D. B. McKay, Mayor.
Response, H. Marshall Taylor, Jacksonville.
Announcements.
Address of President, John A. Simmons, Miami.
Address (by invitation), "Factors Which Control the End Results of Operations on the Gall Bladder and Thyroid Gland," George W. Crile, Cleveland, Ohio.

SECOND GENERAL SESSION.

MUNICIPAL AUDITORIUM.

APRIL 3RD, 12:15 P. M.

President in the Chair.
Report of Officers:
Secretary-Treasurer—Editor, Shaler Richardson.
Executive Committee—R. H. McGinnis.
Committee on Legislation and Public Policy—W. M. Rowlett.
Hospital and Medical Education Committee—R. O. Lyell.

MEETING OF HOUSE OF DELEGATES.

MUSIC ROOM, TAMPA BAY HOTEL,

APRIL 3RD, 5 P. M.

THIRD GENERAL SESSION.

MUNICIPAL AUDITORIUM

APRIL 4TH, 12 NOON

The President in the Chair.

Annual election of officers.

Adjournment for lunch.

SCIENTIFIC ASSEMBLY.

Section On Medicine

BALLROOM, TAMPA BAY HOTEL,

APRIL 3RD, 2 P. M.

Committee on Scientific Work: L. F. Carlton, Tampa, Chairman; E. D. French, Miami; J. W. Alsobrook, Plant City.

Attention is called to the following By-Laws:

"All papers read before the Society shall be its property. Every paper shall be deposited with the Secretary when read."

"No address or paper before the Association, except those of the President and Orators, shall occupy more than fifteen minutes in its delivery, and no member shall speak longer than five minutes, nor more than once on any one subject."

1. "Treatment of Tuberculosis," W. A. Claxton, Miami.

A guide to the treatment of this disease in the home, rather than in a sanatorium. Disease is viewed from the standpoint of the "tubercle" with the effects of exercise on the lesion. Mention is made of intestinal and throat symptoms, medication and heliotherapy.

Discussion: T. Z. Cason, Jacksonville;

R. L. Knowlton, St. Petersburg.

2. "Sporadic Typhus-Brill's Disease—Report of Two Cases," T. H. Bates, Lake City.

Short history of the disease. Identical with Mexican typhus. Occurrence in southeastern United States, especially in southern Alabama and its appearance in Florida. Increase in number of cases reported in Florida. Two typical case histories, both of which made rapid recovery. Comparison of seasonal incidence of epidemic typhus and Brill's disease shown by graphic charts and epidemiology shown on spot maps of Florida and southeastern United States.

Discussion: F. A. Brink, Jacksonville;

E. C. Levy, Tampa.

3. "Gastric Hyperacidity, Its Recognition, Causes and Management," Marvin Smith, Miami.

Gastric hyperacidity is a symptom of gastric irritation; it may arise from organic disease of the stomach mucosa and hypertrophy of the acid glands or its cause may be located in some other portion of the digestive tract, either near or more remote from the stomach, which is itself diseased. Indiscretion in quantity or quality of food intake, particularly of carbohydrates, improper food combinations, or poor mastication, diseased tonsils, teeth, or gums may be a cause or this condition may be a neurosis. A statement from the patient that he has hyperacidity is not sufficient evidence of its presence and cannot be accepted as a basis for treatment. Achylia gastrica accompanied by carbohydrate fermentation or many other conditions may mislead the patient or the physician. In every case of suspected hyperacidity, it is necessary to extract test meals from the stomach and do, not only qualitative, but quantitative estimations before a state of genuine hyperchlorhydria could be said to exist. The management of gastric hyperacidity is not often as simple as it may first appear; its cause naturally determines the modus operandi in treatment. The control of this common complaint frequently requires much time and great patience on the part of both the physician and the sufferer and entails persistent care and rigid dietetic regime.

Discussion: E. B. Milam, Jacksonville;

Burdette Smith, Tampa.

4. "Experience and Treatment of Rattle Snake Bites, Before and After the Antivenum Serum had been Discovered," H. Gates, Bradenton.

Setting forth the value of antivenum serum.

Discussion: W. M. Rowlett, Tampa;

N. M. McDuffie, Manatee.

5. "Cost of Remedial Defects in Our School Population," M. B. Herlong, Jacksonville.

On investigation in Duval County, 9 per cent of our children are repeaters or fail to pass to higher grades, or a loss of 9 per cent of entire school budget. In Duval County, it amounts to \$1,800,000, 9 per cent of which is \$162,000. Lowest percentage found is 8 per cent, highest 15 per cent. Taking 9 per cent as a basis, the cost to the state is \$8,571,329 per year.

Discussion:

6. "Malaria and Dengue," A. L. Blalock, Madison.

Classification of acute malaria with reference to type of parasite. The microscope, the only scientific and correct means to determine the existence of malarial infection or its elimination. Records of cases, showing erroneous reports from state laboratories. A method of search that eliminates error and establishes absolutely correct microscopical findings, thereby avoiding the many tragedies of negative reports.

Discussion: J. K. Johnston, Tallahassee;

Ralph Torbet, Tampa.

APRIL 4TH, 9 A. M.

7. "Artificial Infant Feeding Under One Year of Age," Leldon W. Martin, Punta Gorda.

Introduction; mixed feeding; substitutes for mother's milk: (1) goat's milk, (2) cow's milk, (3) powdered milk, complete and incomplete. Requirements of cow's milk, methods of preparation. Starting newborn or premature baby. Other necessary articles of diet. Addition of food other than milk.

Discussion: C. H. Kirkpatrick, Arcadia;

H. Q. Jones, Fort Myers.

8. "Impotency in Young Men, Its Treatment," John E. Hall, West Palm Beach.

Its antiquity, dating back into the mists of time. References made to it in both profane and sacred history. Its etiology, and the effect that psychic influences have upon its production. Its treatment. The necessity of securing the patient's confidence in order to effect a cure. Drugs having little, or no value, except from a psychic standpoint. If due to organic trouble, the importance of eliminating the underlying cause.

Discussion: H. Mason Smith, Tampa;

C. D. Christ, Orlando.

9. "The Normal Relation of Psychiatry to the General Practice of Medicine and Surgery," G. H. Benton, Coral Gables.

To indicate the neglected or overlooked aspect of the state of mind in its relation to the management of everyday illnesses on the part of any physician suggests either a lack of knowledge or comprehension or inefficiency in the art of application. Whether or not the mental status is dominant or subdominant, obvious, or needs particular inquiry to bring out, its importance is none the less and bears definite relation to the psychosomatic reactions which constitute the individual "psychiatric situation" (state of mind) of every patient who seeks relief from whatever malady he may be suffering with. The central nervous system is the intake and outlet of all sensations and motor responses which constitute the entire adjustment of both intrinsic and extrinsic environment which means the individual himself. The mind is the product of the organization of the central nervous system and within its different departments has to do with every action or reaction which transpires from before birth to the termination in death of each individual. Therefore, a comprehension of the exact factors in due relationship seems imperative. To treat a patient for a boil and overlook a typhoid fever concomitant seems outrageous, and yet how many mental states are entirely overlooked or ignored in connection with functional and organic somatic maladies.

Discussion: H. Mason Smith, Tampa;

Ralph Greene, Jacksonville.

10. "Some Psychoses in Which There May Be Recovery," W. M. Bevis, Lakeland.

An outline of the forms of mental diseases in which recovery under proper treatment may be reasonably expected; those in which a majority may recover and those in which a few recover. In this brief paper, an attempt is made to outline the reasons why it often happens that there is such a relatively small number who recover and an emphasis made on the importance of early recognition of a psychosis, correct diagnosis, appropriate treatment, and proper after care.

Discussion: H. Mason Smith, Tampa;

N. H. Ragsdale, Pierce.

11. "Heart Block," E. W. Bitzer, Tampa.
Congenital. Acquired: functional block; traumatic, following infections; arteriosclerotic. Symptoms; Stokes-Adams syndrome; cardiac failure. Treatment: Barium chloride, thyroid, adrenalin, digitalis. Three cases reported: 1. Presenting Stokes-Adams syndrome and varying block 2:1 and 3:1. Arteriosclerotic type. 2. Arteriosclerotic and nephritic associated with auricular fibrillation and ventricular premature beats. Probably a complete block. 3. Probably congenital complete block.
Discussion: Carl Williams, St. Petersburg;
Herman Harris, Jacksonville.
 12. "Use and Abuse of Blood Transfusions," W. W. Kirk, Jacksonville.
History of transfusions; technic, indications for, contraindications for; what may be hoped for with properly given transfusions. Summary.
Discussion:
APRIL 4TH, 2 P. M.
 13. "Hypertrophy of the Thymus Gland, with X-ray Pictures, Before and After Treatment," G. S. Osincup, Orlando.
Chief symptoms with case illustration of each, showing results of treatment.
Discussion: J. D. Love, Jacksonville;
D. D. Martin, Tampa.
 14. "Nonsurgical Treatment of Infections of the Biliary Tract," George P. Hamner, Tampa.
Conditions found in biliary stasis with the more or less serious complications resulting therefrom, the principal one being congestive and infectious hepatitis. Advantages of the Lyon-Meltzer nonsurgical treatment in cases not requiring surgery, over the older methods of treatment by rest in bed and chologogues, with case reports. Summary: It is a safe, time-saving procedure to the patient and has also its uses as a valuable adjunct to surgery of the upper quadrant.
Discussion: E. W. Bitzer, Tampa;
John S. Helms, Tampa.
- CASE REPORTS.
1. "Scleroderma," J. M. Anderson, Sears.
Discussion: C. A. Andrews, Tampa;
J. L. Kirby-Smith, Jacksonville.
 2. "Spider Poisoning Caused by Bites of Genus Latrodectus Mactans, or Notorious Black Widow Spider," Henry E. Palmer, Tallahassee.
Discussion:
 3. "Oesophageo-Tracheal Fistula," J. T. Cowart, Tampa.
Discussion: J. C. Dickinson, Tampa;
J. W. Taylor, Tampa.
 4. "Lung Cancer, with Report of Three Cases," J. C. Davis, Jr., Quincy.
Discussion: C. D. Christ, Orlando;
J. S. Helms, Tampa.
 5. "Cicatricial Ectropion Repaired by Using Free Dermic Graft From Temple," J. W. Taylor, Tampa.
Discussion: Shaler Richardson, Jacksonville.
2. "Observations Concerning the Duodenum," Howard D. Van Schaick, Jacksonville.
Embryology and physiology of the duodenum. Pathological conditions and relation to gall-bladder disease. Cause of unsatisfactory results of gall-bladder surgery. Case histories with lantern slides.
Discussion: C. D. Christ, Orlando;
W. N. Parkinson, St. Augustine.
 3. "Roentgen Observation of Duodenal Lesions," Bundy Allen, Tampa.
Frequency of lesions involving the duodenum; simple ulcers; perforating ulcers; diverticulae. Report of a case of primary carcinoma of the duodenum.
Discussion: R. E. Baldwin, Tampa;
O. O. Feaster, St. Petersburg.
 4. "Surgical Treatment of Duodenal Ulcer," Ralph Gowdy, Miami.
Which duodenal ulcer cases are surgical? Radical difference of opinion among prominent surgeons, as to which surgical procedure is best. Gastroenterostomy, most widely used, losing in popularity. Partial gastric resection and gastroenterostomy, taking its place in Europe, seems too radical. Judd's partial resection of pyloric sphincter with ulcer and gastro-duodenostomy.
Discussion: John S. Helms, Tampa;
John E. Boyd, Jacksonville.
 5. "Foreign Bodies in the Urinary Bladder," Gideon Timberlake, St. Petersburg.
Foreign bodies in the bladder are, obviously, those of endogenic or exogenic origin. The former involves the greater number of patients seeking relief from vesical calculi. The latter involves such cases as have either suffered urinary obstruction from which they seek relief through instrumentation or those lay operators seeking sexual stimuli by introduction of various articles into the urethra.
Discussion: E. Clay Shaw, Miami;
Wm. M. Davis, St. Petersburg.
 6. "Instrumentation and Operative Technique, with Post Operative Results of Electro Enucleating Tonsillatome," F. Peter Herman, West Palm Beach.
General description and detailed construction. Operative technique. Bloodless, operative and post-operative, thereby rendering a greater efficiency owing to cleanliness of operative field. Convalescence shortened. Absence of cicatrix.
Discussion: H. Marshall Taylor, Jacksonville;
C. E. Dunaway, Miami.
 7. "Gas Anesthesia," W. E. Van Landingham, West Palm Beach.
Comparative uses as applied to modern surgery. A life-saving appliance abused and ignored. Certain advantages over other forms of anesthesia. Plea for recognition among surgeons where opportunity for use is available.
Discussion: John E. Hall, West Palm Beach;
E. M. Hendricks, Fort Lauderdale.

APRIL 4TH, 9 A. M.

- SCIENTIFIC ASSEMBLY.
Section On Surgery
MUSIC ROOM, TAMPA BAY HOTEL,
APRIL 3RD, 2 P. M.
- Committee on Scientific Work: L. F. Carlton, Chairman, Tampa; E. D. French, Miami; J. W. Alsbrough, Plant City.

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1. "Surgery of the Upper Right Quadrant of the Abdomen," H. A. Walker, Hollywood.
Detailed history of cases, with differential diagnosis of symptoms arising out of surgical affections of the upper right quadrant, being a differential diagnosis between epigastric pain due to appendicitis, from those of cholecystitis, cholelithiasis, duodenal ulcer, pyloric ulcer, and carcinoma of the above mentioned, also phrenic abscess and abscesses occurring from perforated gastric ulcers into the lesser peritoneum and perforations of the gall bladder or biliary tract.
Discussion: Cayetano Panettiere, Miami Beach;
L. J. Efid, Tampa.

8. "Appendicitis," Alfred Moore, Kendall.
Embryology of appendix vermiformis. Anomalous positions. Symptoms and urgency of appendectomy. Selection of incision and operative technic. Appendicitis—the white race as compared with the negro race and a possible cause. The great frequency of appendicitis and zero mortality if surgeons are called early.
Discussion: J. A. Simmons, Miami;
M. H. DePass, Gainesville.
9. "The Combined Medical and Surgical Treatment in Intestinal Obstruction and Septic Invasion of the Peritoneum," Kenneth Phillips, Miami.
Based on the theory that the clinical syndrome and cause of death in these cases are due chiefly to toxemia, bacteremia, and possibly, as recently advocated by "Williams" of London, to toxins from a specific organism, we have devised a method of treatment which appears to be reasonably scientific and is of definite value in so far as our clinical observations are concerned. The treatment consists in first supplying the blood stream with an excess of fluid; secondly, in furnishing a surplus of blood stream oxidation, a stimulation of metabolism together with some nutrition; thirdly, by establishing a gastro-intestinal drainage and where possible, to change the intestinal flora to favor an aciduric type; and, lastly, by keeping the blood chlorides up to a normal level and attempt to reduce the high non-protein nitrogen which accompanies these cases. By use of this method, it is possible not only to tide over those cases of non-organic obstruction until a spontaneous recovery takes place, but also in cases of frank organic obstruction to render the patients in much better condi-

tion for surgery and thus reduce the mortality rate. It has been observed that most of these cases do not find their way to the surgeon until late in the picture and they are extremely poor surgical risks and carry a high mortality rate if operated upon immediately.

Discussion: J. A. Simmons, Miami;
Ralph Gowdy, Miami.

10. "Acute Intestinal Obstruction," Herman Watson, Lakeland.

Causes. Changes in the intestinal contents. Symptoms, stressing importance of early recognition and proper treatment.

Discussion: John S. McEwan, Orlando;
Fred Waas, Jacksonville.

11. "Treatment of Intestinal Obstruction, with Report of Cases," David R. Kennedy, Sarasota.

Report from various clinics in the United States. Treatment of obstruction with a concentrated solution of magnesium sulphate through duodenal tube, rectal tube, jejunostomy tube. Exhibit of model of bed appliance, designed to aid in moving the bowels. Report of five cases which recovered after the above treatment.

Discussion: John S. Helms, Tampa;
Robert B. McIver, Jacksonville.

12. "Transplantation of the Ureters." (Lantern Slides), Robert B. McIver, Jacksonville.

The recent progress in deviation of the upper urinary tract. Problem presented by exstrophy of the bladder. Two completed cases of transplantation of ureters into large bowel are presented together with slides illustrating the operative steps and technical considerations.

Discussion: J. C. Vinson, Tampa;
E. C. Shaw, Miami.

13. "Roentgen Diagnosis of Injuries to the Vertebrae with Special Reference to the Lumbar Area," L. W. Cunningham, Jacksonville.

Frequency of injuries of the spine in automobile accidents; how often unrecognized; late evidence with symptoms; changes in the vertebrae incident with age; caution and care required in stating an injury present; necessity for careful examination of the spine.

Discussion: J. C. Dickinson, Tampa;
F. L. Fort, Jacksonville.

14. "Cesarean Section—The Type of Operation Indicated," John R. Bolding, Bradenton.

Brief review of Cesarean section. Indication for classical section. Indication for low or cervical section. Indication for modified porro section.

Discussion: Charles Jennings, Jacksonville;
G. E. W. Hardy, Tampa.

15. "Paralytic Deformities of the Foot and Their Correction," F. L. Fort, Jacksonville.

Paralysis below the knee results in deformity due to unbalanced muscle power, gravity and improper weight bearing. Deformity in many cases can be avoided by enforced rest after onset of paralysis, massage, graduated exercises, proper splinting, etc. Correction of deformity within one year is possible with the use of corrective plaster casts, braces, properly altered shoes, traction, etc. Operative correction in old cases is necessary. The type of operation depends upon the deformity. These include: tendon lengthenings, muscle transplants, arthrodesis of flail joints, bone plastic reconstructive operation.

Discussion: L. F. Carlton, Tampa;
Donald T. Babcock, Miami.

APRIL 4TH, 2 P. M.

16. "Cataracts—Twenty-five Years Observation," Norman M. Heggie, Jacksonville.

I have selected this title with its suggested latitude in order that I may be within the subject of the paper in discussing any phase of the cataract, from its formation to removal, and subsequent treatment.

Discussion: W. S. Manning, Jacksonville;
Rollin Jefferson, Tampa.

17. "Fracture of Base of Skull," J. Raymond Graves, Miami.

Cause, symptoms, concussion, compression, laceration, hemorrhage, medical treatment, surgical treatment. Report of cases.

Discussion: C. E. Sayles, Miami;
H. C. Babcock, Miami.

18. "A Study of External Otitis," L. C. Ingram, Orlando.

We have for too long considered the cause, effect and treatment of external otitis unworthy serious effort. Evident the many patients now drifting about seeking relief. A better knowledge of the role that mycotic infection, body tissue, reaction, etc., has in etiology may suggest some systemic as well as local treatment.

Discussion: J. Brown Farrior, Tampa;
B. F. Hodsdon, Miami.

19. "Injuries of the External Genitals in the Male, with Report of Cases," R. B. Harkness, Lake City.

Accidental injuries to the genitals of the male are of comparative frequency, especially in industrial workers, who come in contact with moving machinery, especially revolving shafts, etc. These structures on account of their profuse blood supply and to the character of the integument, easily lend themselves to repair measures, and heal quickly. Repair is best accomplished by utilizing the entire thickness of skin in the form of sliding grafts. Report of case.

Discussion: Earle H. McRae, Tampa;
Robert B. McIver, Jacksonville.

20. "The Sinus Question," R. E. Repass, Fort Lauderdale.

Relation of nasal accessory sinus disease to systemic diseases, symptomatology, diagnosis and special emphasis on climatic treatment.

Discussion: J. W. Taylor, Tampa;
H. Marshall Taylor, Jacksonville.

21. "Uterine Hemorrhage with No Gross Change in the Uterus," Richard M. Klussman, Fort Lauderdale.

Uterine hemorrhage due to causes other than miscarriage, childbirth, inflammation, tumors, actual disease, inflammation, or cysts of the ovaries. Considering, as possible causes, general conditions such as cardiovascular, liver, and kidney disease, abnormal blood states, acute infections, syphilis, also ovarian dysfunction, arteriosclerosis and fibrosis uteri, and their most satisfactory treatment.

Discussion: F. A. Gowdy, Miami;
W. J. Buck, West Palm Beach.

22. "Synergistic Analgesia in Labor," Franklyn Thorpe, Tampa.

Animal experimental work. Factors governing the proper time of administration. Good results dependent upon the proper time and technic of administration. Technic, experience and statistics of the writer in 300 cases. Summary of advantages and disadvantages.

Discussion: W. M. Rowlett, Tampa;
J. K. Norwood, Jacksonville.

PROGRAM OF THE
NINTH ANNUAL MEETING
OF THE

FLORIDA RAILWAY SURGEONS' ASSOCIATION
Tampa Bay Hotel, Tampa.

ENTERTAINMENT

8:30 p. m. Smoker and Entertainment at Chinese Pagoda Club, 512 South Howard Ave.

GENERAL MEETING

APRIL 2ND, 10 A. M.

Call to Order, L. S. Oppenheimer, Chairman Committee on Arrangements.

Invocation, Rabbi R. Eliot Grafman.

Address of Welcome, W. P. Adamson, Tampa.

Response, J. Harris Pierpont, Pensacola.

President's Address, J. S. Turberville, Century.

SCIENTIFIC PROGRAM

1. "Railway Fractures," Joseph Halton, Sarasota.

2. "Pelvic Fractures," Gordan Stanton, Hastings.

3. "Proper Treatment of Fractures by Railway Organization," L. A. Peek, West Palm Beach.

4. "An Interesting Case Report," L. M. Anderson, Lake City.

5. "Management of Fractures," Frederick Bowen, Jacksonville.

6. "Spinal Anaesthesia," Wm. N. Parkinson, St. Augustine, Chief Surgeon, F. E. C. Ry.

7. Address, J. W. Burke, Petersburg, Va., Chief Surgeon, S. A. L. Ry.

8. Address, F. G. Renshaw, Pensacola.

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THIRD DISTRICT—JAS. H. DYER, M.D. Lake City
Hamilton, Dixie, Taylor, Madison, Columbia, Suwannee, Lafayette.
FOURTH DISTRICT—H. H. HARRIS, M.D. . . . Jacksonville
Nassau, Clay, Duval, St. Johns.
FIFTH DISTRICT—J. L. CHALKER, M.D. Ocala
Citrus, Marion.
SIXTH DISTRICT—R. H. KNOWLTON, M.D. . . . St. Petersburg
Pinellas.
SEVENTH DISTRICT—SAM PULESTON, M.D. . . . Sanford
Brevard, Volusia, Seminole.
EIGHTH DISTRICT—W. LASSITER, M.D. Gainesville
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OUR NEXT ANNUAL MEETING

The coming meeting of the Association to be held in Tampa, April 3rd and 4th, promises to be the most interesting our organization has ever held. The program committee has arranged a program of two parts, *i. e.*, medical and surgical sections. Some forty-one papers on diversified subjects will be presented; each has been carefully chosen by the committee. The program is on page 469 of this issue. Dr. George W. Crile of Cleveland will be the honor guest and he needs no introduction to our Association. He has chosen for his subject: "Factors Which Control the End Results of Operations on the Gall Bladder and Thyroid Gland." The entertainment features are rather unique and promise to afford both members and their wives a continuous round of interest and pleasure. The members of the Hillsboro County Medical Society have worked during the entire present year preparing for what will undoubtedly be the best meeting the Association has ever held. No doubt all attendance records will be broken. As a member of the Florida Medical Association, you cannot afford to miss this meeting.

THE ANNUAL BANQUET.

For some years it has been the custom for the County Medical Society at the place of meeting of the annual association convention to act as host at a banquet for all the members in attendance. At times this has worked somewhat of a hardship on the smaller county medical societies. Recently, the Executive Committee of the State Association took up this matter and decided that this precedent should be done away with. It is a well-known fact that most of the state and national medical associations hold annual banquets at their meetings and charge each guest for attending. This year, each member will be asked to purchase for himself and guests, tickets covering the banquet charge.

The Executive Committee wishes the members of the Association to know that the Hillsboro County Medical Society was very desirous of acting as banquet host during our coming meeting. However, the Executive Committee deemed it advisable to urge the custom of purchasing banquet tickets at every annual session of the Association in order that the hosts of the Association be relieved of this embarrassment.

HONORARY MEMBERS

Is it fair for the County Societies to have to pay dues for Honorary Members? We do not think so. Probably every County Society has them on their list, composed either of elderly physicians who are unable to pay their dues or those who live with us, do not practice, but like to belong and attend our meetings.

We think that the County Societies should have these men on their honorary list and should not have to pay dues for them to the State Society. We wish the various County Societies would take this matter up at our next state meeting and be prepared to discuss it.

REPORTS OF COUNCILLORS.

At the invitation of our president, Dr. John A. Simmons, the officers, committees and councillors of the Florida Medical Association held a pre-convention meeting at the Tampa Bay Hotel, Tampa, at 8 p. m. January 26th. Many questions concerning the approaching annual meeting were

discussed. The Scientific Program Committee advised the division of the program into two sections, namely, the Section on Medicine and the Section on Surgery. The various committees read reports, after which the councillors made the following reports:

FIRST DISTRICT—W. C. PAYNE . . . *Pensacola*
Okaloosa, Walton, Santa Rosa, Escambia.

This district is well organized with two live societies; the one society taking care of the members of Okaloosa and Walton Counties and the other of Santa Rosa and Escambia. I have met with the societies in my district during this year and have talked with every member of this Society at some time during the year. In these four counties there are only two eligible men who are not members of the County Society and State Association.

SECOND DISTRICT—J. B. BRINSON, JR. . . *Monticello*
Liberty, Gadsden, Jefferson, Wakulla, Leon, Franklin.
No report.

THIRD DISTRICT—JAMES H. DYER . . . *Lake City*
Hamilton, Dixie, Taylor, Madison, Columbia,
Suwannee, Lafayette.

Five of these counties are fully organized and are doing splendid work for organized medicine. The counties of Dixie and Lafayette are not yet organized, but we hope to pull them into the fold in the near future.

The "set up" for the counties organized is as follows:

COLUMBIA COUNTY, LAKE CITY, FLA.

Dr. Thomas Harry Bates, President.
Dr. L. J. Arnold, Vice-President.
Dr. P. C. Farnell, Secretary and Treasurer.
Dr. L. M. Anderson, Delegate.
Dues paid, 100 per cent.

SUWANNEE COUNTY, LIVE OAK, FLA.

Dr. T. S. Anderson, President.
Dr. H. M. Strickland, Vice-President.
Dr. W. C. White, Secretary and Treasurer.
Dr. J. M. Price, Delegate.
Dues paid, 100 per cent.

HAMILTON COUNTY, WHITE SPRINGS, FLA.

Dr. Dan Cone, President.
Dr. Joe Corbett, Vice-President.
Dr. R. A. Barnett, Secretary and Treasurer.
Dues paid, 100 per cent.

MADISON COUNTY, MADISON, FLA.

Dr. E. Long, President.
Dr. A. T. Blalock, Vice-President.
Dr. George O. Davis, Secretary and Treasurer.
Dues paid, 100 per cent.

TAYLOR COUNTY, PERRY, FLA.

Dr. G. H. Warren, President.
Dr. W. W. Tyson, Vice-President.
Dr. R. J. Tyson, Secretary and Treasurer.
Dues paid, 100 per cent.

About a year ago there was organized in this district, The Suwannee River Medical Association, comprising the counties of Columbia, Hamilton, Madison and Suwannee. The meetings rotate monthly at the county seats of the named counties, and each meeting has been exceedingly interesting and instructive.

After contacting the majority of the physicians in this district, I find that they are almost unanimously in favor of the reduction of the State dues from \$10 to \$5.

FOURTH DISTRICT—HERMAN H. HARRIS, *Jacksonville*
Nassau, Clay, Duval, St. Johns

The Fourth Councillor District consisting of the above named counties is well organized. The counties of Nassau and Clay have no local medical society, due to the small number of physicians practicing in these counties. A large percentage of the physicians in these two counties are members of either the St. Johns or the Duval County Society. There were but eight eligible doctors in these four counties who were not affiliated with a county society, and each of these eligibles has been approached and

invited to join their nearest society. The applications of three of these doctors are now before the society.

The medical societies of Duval and St. Johns are fairly well attended and efforts have and are being made to increase the attendance at meetings.

All meetings of the Duval County Medical Society have been attended by the Councillor and he has been able to meet with the St. Johns Society once during the year as well as attend a conference of the Board of Governors of that body.

It is hoped that by the time of the meeting of the Florida Medical Association, that every eligible physician in this district will be a member of a county medical society and of the State Association.

FIFTH DISTRICT—J. L. CHALKER Ocala Marion and Citrus.

In Marion County and adjacent thereto there are 21 physicians eligible to membership in the local society; 18 were members in good standing at the end of the year 1927. One member has recently reopened his office which was closed for a short time in 1927, and has signified his intention of becoming an active member in 1928; one member has not paid his 1927 dues and there is one physician that moved to the county in the early part of 1927, whose application for membership we have not been able to secure.

The Marion County Medical Society meets regularly each month at luncheon, after which we have either a short paper or discuss case reports.

Your Councillor is Secretary of this Society and tries to attend regularly.

The physicians of Citrus County, four in number, are all members in good standing of the Pasco-Hernando-Citrus County Medical Society. This Society meets once each month, the meeting place is alternated between the counties. Your councillor met with this society in June at their regular meeting and found the Society well organized and well attended. After luncheon together there is a scientific program which is carried out in an interesting manner.

During the year the Munroe Memorial Hospital of Ocala, has been completed and opened for the reception of patients. This hospital takes the place of the old Marion General, and is modern in every detail, and has facilities for handling ninety patients.

During the year, the Central Florida Medical Society has been reorganized, composed of at present physicians of Alachua, Marion and Lake County Societies, and will eventually take in Sumter, Citrus, Hernando and Pasco Counties. This organization is entirely independent of the State organization, but in order to become a member a physician must be in good standing with his County Society. Dr. G. C. Tillman of Gainesville is president. This Society meets twice each year—in February and November—and has a social and scientific program.

SIXTH DISTRICT—

ROSCOE H. KNOWLTON St. Petersburg
Pinellas.

Our total membership to date is eighty-six. Since April fifth, three members have been gained and three lost, one by death, one by transfer and one by expulsion.

Regular meetings are held every two weeks except during the summer months, and the average attendance has been twenty-eight.

We have had twenty-two scientific papers presented to the society and one address by a distinguished visitor, Dr. Kelly, of Baltimore. We have also had two social evenings, one a dinner for the ladies, and the other a stag dinner for the members only.

Among the activities of the district may be mentioned the following: influence has been used with the representatives from this district toward the passage of proper state medical legislation; the society has cooperated with the school authorities in the physical examination of school children; the society ranks 100 per cent in the payment of state dues; practically every eligible man in the district is a member of the society; the society has

continued the publication of the names of its members as a paid advertisement in the telephone directory.

At present, the society is in the midst of a revision of its by-laws, especially for the purpose of upholding a high ethical standard among its members.

Meetings are held regularly in the Medical Arts Building, and a welcome is always extended to all visiting physicians.

SEVENTH DISTRICT—SAM PULESTON . . . Sanford Brevard, Volusia, Seminole.

No report.

EIGHTH DISTRICT—W. LASSITER . . . Gainesville Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.

No report.

NINTH DISTRICT—J. M. NIXON . . . Panama City Holmes, Washington, Bay.

No report.

TENTH DISTRICT—HERMAN WATSON . . . Lakeland Polk.

We have a membership of fifty-eight, all paid up for the year 1927. No dues have been paid yet this year. We held regular meetings during the year, which were well attended, and much interest shown in organized medicine. During the year we held three clinical meetings with visitors who are more or less prominent, conducting the clinics.

I feel that we will have no trouble in securing a 100 per cent paid-up membership for the year 1928.

ELEVENTH DISTRICT—R. J. HOLMES . . . Miami Dade.

The progress of organized medicine in Dade County during the past year, as reflected by the Dade County Medical Society, undoubtedly reached the zenith of its remarkable existence. Beginning the year's activities as the Banner County of the entire state in points of numbers and paid memberships, it has shown little, if any, inclination to relinquish its hold upon this enviable position. Led by one of the state's "grand old men" of organized medicine, Dr. R. C. Woodard, and supported by the untiring energy of its secretary, Dr. G. Raap, the Dade County Medical Society with one of its most loved members in the chair of President of the State Medical Association, has no apologies to offer. Your councillor has, on a number of occasions, called upon these men and other members to assist him in carrying out his duties, and, although such duties at times have necessitated long trips into surrounding territories, he has always received the heartiest cooperation and a ready response to any suggestion for the interest of our profession.

Possibly the most important undertaking has been the organization of the Florida East Coast Medical Association. The idea of an Association for the promotion of future scientific study and stronger fellowship among the men of the East Coast, while originating in the minds of our Palm Beach colleagues, found a quick response in the Dade County Medical Society which comprises about fifty per cent of its membership. That the organization has been a success is demonstrated by the fact that at the first annual meeting in Palm Beach one hundred and five members were present, twenty scientific papers were read and discussed freely, and the additional charges made by the orchestra for excessive time came very near breaking the treasurer. Plans have already been made for a two-day meeting in Miami on May 31st and June 1st, the first day of which will be devoted entirely to clinics at the Jackson Memorial Hospital. That this organization has accomplished much toward creating fellowship and interest in scientific study is demonstrated by the fact that at practically every medical meeting held within its boundaries, the number of visiting colleagues has greatly increased. The regular programs of the Dade County Medical Society are now mailed to every member of the Florida East Coast Medical Association.

Further progress is indicated by the Dade County Medical Society becoming an incorporated body. Its meetings are now held in its new hall which is comparable with any of our large medical academies. Two or more scientific papers are heard and discussed at every meeting and the program committees have shown great interest in their duties.

The Society now maintains its own Physicians and Nurses Directory and has shown a strong inclination to establish a medical library in the near future.

At a recent election of officers, Dr. Walter Jones was elected President of the Society, with Dr. R. M. Harris capably filling the secretary's chair. While these men are young in years, no member of the Dade County Medical Society is in doubt about the true course of the ship with "Walter" and "Bob" at the helm.

To report the progress of organized medicine in Dade County is a subject for a lengthy paper and not a short report such as has been requested by our President. While we may boast of our accomplishments, we venture to say that they are as "barren grain upon the desert sand," compared with the progress that has been made by various cults, quack and yogi during the past year. Your councillor, while not unduly alarmed, is fully convinced that Southern Florida is rapidly becoming the winter mecca for these antagonists of organized medicine. With the help of our legislature, their progress has, indeed, been astounding. Every newspaper in Miami carries their ads in brazen headlines. Many of our well-trained, thoroughly competent younger men have financial difficulty in surviving the long Florida summer. The irony of the situation does not improve materially during the winter when hundreds of fly-by-night quacks of every description, come to our shores for a few brief weeks to harvest the profits of their infamous trade. Your councillor has no suggestion to make. He simply reports the condition as he believes it to exist.

He is not alone in his belief that it is quite possible for the army of quacks, who visit Florida every winter, to some day become real contenders for supremacy over organized medicine in this section.

TWELFTH DISTRICT—H. E. PARNELL . *Ft. Myers*
Glades, Charlotte, Hendry, Lee, Collier
No report.

THIRTEENTH DISTRICT—H. MASON SMITH, *Tampa*
Hillsboro, Hernando, Pasco
No report.

FOURTEENTH DISTRICT—ROBERT L. KENNEDY
. *Malone*
Calhoun, Jackson, Gulf.

We have a membership in the Jackson County Medical Society of twenty. This membership includes physicians from Jackson, Calhoun and Gulf Counties. Practically every eligible doctor in this district is a member of the Society.

The interest continues in our meetings, which are held monthly, beginning with seven-o'clock dinner at the Chipola Hotel.

Good papers are read at each meeting, followed by general discussion. A splendid spirit of fellowship exists throughout its membership, with more interest manifest in organized medicine now than ever before.

FIFTEENTH DISTRICT—
W. E. VAN LANDINGHAM *West Palm Beach*
Palm Beach, Broward.

I feel it a duty to take the two counties collectively for the reason that both have worked in harmony with themselves as well as each other. Progress has been the watchword. Each has maintained the high standard set and has figured in movements which we feel have been instrumental in strides forward never before known. Together with the officers and members of the Dade County Medical Society, as well as through the influence and help of our honored President, Dr. Simmons, the Florida East Coast Medical Association was formed, and held its first meeting in West Palm Beach

in November. A number of excellent papers were read, followed by a banquet which ninety-seven attended. Dr. Simmons, Dr. Woodard, Dr. Ralph Greene and others in attendance were on the program and talked during the banquet hours. This brought the men of the East Coast together in a get-acquainted manner and has been productive of real results.

Another organization, known as the Palm Beach Academy of Medicine, has sprung into existence in Palm Beach County during the year, organized for the advancement of medical science, at which many papers have been read and many social evenings whiled away. Out-of-town physicians have accepted invitations and read papers, among them Dr. Christ of Orlando; Drs. Greene and Milam of Jacksonville; Drs. Snyder, Flipse, Weiland Beckwith and Fitzpatrick, of Miami; Drs. Folsom and Orr, of Orlando.

The membership is limited, one or two papers read at each meeting held twice monthly and discussion entered into by every member present. While conditions during the year just passing have not been what we could wish as conducive to holding the large membership up to its fullest quota from a financial standpoint, yet we have hopes that ere the annual meeting takes place that we will be able to secure a paid-up membership that will be a credit to our district. Certainly the interest shown by all members would justify us in stating that every member is more solidly behind organized medicine than ever before, giving indications of sensing the danger ahead of our honored profession in the inroads being made by the cults representing every form of quackery imaginable, and your councillor begs to sound a note of warning to our legislative committees to take action to curb the activities of these different cults in our state.

Lastly, Mr. President, we wish to congratulate you and the State Association, for your activities during your administration. You have been ever alert to your responsibilities; you have been at all times available when called, and these have been many; you have spent freely of your time and money to further any new projects for the advancement of the profession in this district, and we have been able to taste of the fruits of your efforts.

May the State Association of ethical, upright and learned men of the noble profession of the healing art ever continue and prosper in its efforts for the advancement of a righteous cause.

SIXTEENTH DISTRICT—M. M. HANNUM . *Eustis*
Sumter, Lake.

No report.

SEVENTEENTH DISTRICT—
J. ARTHUR FORD *Orlando*
Osceola, Orange.

The Seventeenth District includes Orange and Osceola Counties and the membership of both Counties are incorporated in the Orange County Medical Society, therefore the total activities of this district are represented by that of the Orange County Society. During the past year there have been twelve regular meetings and one called.

There was a total annual attendance of three hundred. Ten papers were read and out of this number, nine were by local men and one by an outside man.

The society has lost one member by death, Dr. L. W. Toles, of Orlando. Five members have changed their membership to other societies. Seven new members were admitted and one Honorary membership conferred upon Colonel George Johnston, M. D. There remains on roll fifty active members and three honorary members.

This District has in the past year done everything to uphold the dignity and ethics of the profession, maintaining at all times a close adherence to the policies of the state organization.

It has been our aim to acquire as members all regular practicing physicians in the district; not only this but we have striven to create a mutual interest in each member by insisting on regular attendance. Numerical

strength means nothing unless there is cooperation and elimination of strife. This, as any organization, must have harmony and a purpose.

I feel that a great deal has been accomplished in the past year in this district in the way of bringing the rural physicians into our meetings and then giving them something when they come. There is no reason why every physician in this state should not be affiliated with some society even if at a sacrifice; and any society or district which does not make an effort to interest them is delinquent to the state organization.

Another point of interest that I should like to mention is inter-county visiting which the Seventeenth District has more or less sponsored in the past. On every occasion of moment we have taken the opportunity of inviting members of other societies to share with us our hospitality.

To bring out a stronger state organization every District and County should recognize a mutual interest in each other. The old story, that the better you know one the better you like them holds true here. So let's urge the biggest and friendliest state meeting in Tampa in the history of our organization. We should all pull together for organized medicine in every possible way.

EIGHTEENTH DISTRICT—J. M. DAVIS, *Bradenton*
Manatee, Sarasota.

No report.

NINETEEN DISTRICT—M. L. CRUM . . . *Arcadia*
DeSoto, Hardee, Highlands.

No report.

TWENTIETH DISTRICT—J. Y. PORTER, JR., *Key West*
Monroe.

No report.

TWENTY-FIRST DISTRICT—H. C. Mc-
DERMID . . . *Okeechobee*
St. Lucie, Okeechobee, Indian River, Martin.

No report.

STATE NEWS ITEMS

At the February 10th meeting of the Pinellas County Medical Society, held at the Medical Arts Building, the following program was presented: "Nervous Indigestion," Dr. N. M. Marr, St. Petersburg; "Nutritional Needs to the Third Year," Dr. Grace Whitford, Orono.

* * *

Dr. F. Peter Herman, of West Palm Beach, by special invitation read a paper before the New York Academy of Medicine, on Thursday, February 23, dealing with the perfection of his new instrument, devised for the bloodless removal of tonsils. On the following day, Dr. Herman was invited to demonstrate this instrument before a group of specialists, at the Manhattan Eye, Ear, Nose and Throat Hospital. After this demonstration, Dr. Herman was invited to conduct an operative clinic before the staff of St. Luke's Hospital, early in May, of this year, by Dr. Antonie P. Voislavsky, chief-of-staff of this hospital.

The Medical Study Club of Orlando was formed in June, 1926, the object of the Club being to stimulate interest in the study of the different phases of medical practice and to promote a more sociable and harmonious spirit among the members of the profession. The membership was limited to the younger physicians and during the first year, regular meetings were held and papers read by the members and by a few of the older men, who were the guests of the Club. This year, it was thought well to invite an outstanding man from one of the medical centers to speak, not only for the Club, but for the benefit of the entire profession of the community. On December 9, 1927, Dr. Stewart R. Roberts of Atlanta spoke on "Nephritis and Allied Conditions," which was preceded by a dinner to him and visitors. Some fifty doctors attended, among them being Drs. H. Mason Smith, N. L. Spengler and R. R. Duke of Tampa; H. D. Van Schaick of Jacksonville, and others from nearby towns. The present membership is composed of Doctors Chappell, Day, Collins, Sinclair, Osincup, Mallory, Spiers, Davilla and Andrews.

* * *

Drs. E. W. Bitzer and H. Mason Smith of Tampa were visitors in Jacksonville March 7th while en route to New Orleans to attend the American College of Physicians which was in session. They have both been elected to Fellowship in the College and their degree was to be received on the evening of March 10th at a special convocation of the College.

* * *

The Duval County Medical Society met, by invitation, with the Duval County Tuberculosis Association March 6th at Hope Haven. Dr. Van Schaick read a paper on "Fractures and Injuries of the Spine" which was illustrated by lantern slides. Following the scientific program, the ladies of the Board served light refreshments.

* * *

A son was born to Dr. and Mrs. W. McL. Shaw of Jacksonville, at the Riverside Hospital, on February 7th.

* * *

Dr. Gerard Raap announces the removal of his office to the Huntington Building, Miami.



New Medical Arts Building, St. Petersburg

The new Medical Arts Building was recently opened in St. Petersburg at the cost of some \$300,000 dollars. It is the largest and most elaborately planned structure of its kind in Florida. Dr. LeRoy Wylie is president of the Medical Arts Corporation.

Entering the main entrance one comes into an impressive general waiting room or general reception salon. It is of effective finish and furnished to give a homelike atmosphere. This main reception room is 52 feet by 38 feet in dimensions. It has an especially fine mantel and to the right a beautiful information department and telephone exchange. In this department the professional need has been combined with an atmosphere designed to create quiet and rest. No office or group of offices have any entrance to this reception room. On the right is the office of the superintendent, where administrative affairs of the Medical Arts corporation will be carried on, with S. J. Greenwood, general contractor, in charge. Off the main entrance is the elevator lobby, which also gives entrance to the apartments on the third floor of the building. This has a fine wall treatment and faience tile floor.

To the left of this lobby is a fully equipped clinical laboratory and the X-ray departments, the laboratories connecting into a rear entrance, easily approached also on a rear stairway from the physicians' and dentists' office on the second floor. Tenants thus can move to and fro without passing within view of those in the reception room.

Drug Store.

In the North wing of the building is the corner drug store. It is unique as a drug store of the day, for it is in fact the Florida duplicate of the old English apothecary. It has no display of patent medicines, and its only invoices are of the ethical drugs used by the medical profession and supplies for surgeons and the sick room. The front half of the store is equipped as a room where patrons will rest while prescriptions are filled. This rest room is furnished in old English furniture.

The restaurant is on the Seventh Avenue side of the North wing. It is large enough to accommodate 100 guests. This restaurant is not now open, but is available for the use of physicians and dentists for meetings until it has its formal opening under experienced management.

In an uncompleted section of the building will be located a physiotherapy department, with facilities for medicated baths and other treatments. Temporary headquarters for this department are now on the second floor of the building.

The second floor of the new building is designed in units of various forms for the use of doctors and dentists. The regular unit consists of a consulting room and two examining rooms, connected with an inside hall which gives privacy. In the examining rooms are lavatory, electric or gas sterilizer, built-in dressing cabinet and other conveniences, with ample outlets for water, gas, electricity and waste. The total capacity of the doctor's units will accommodate 34 physicians. (Continued on page 480)

End Results in Infant Feeding

Nutritional disturbances such as Marasmus, Decomposition, Atrophy, Intoxication, etc., are usually *the end results* of mild beginning fermentative diarrhoeas. Fermentative diarrhoeas are in turn the end results of improper carbohydrate in the infant's intestines.

Carbohydrate, a portion of which is not absorbed rapidly enough, is attacked by the acid-forming bacteria which results in a diarrhoea.

This form of nutritional disturbance is often corrected in its early stages by the administration of Mead's Casec (calcium caseinate) the principal protein of cow's milk. This is in accordance with the Finkelstein theory that protein inhibits the growth of the acid-forming organisms.

But as a measure of safety in infant feeding, the use of Mead's Dextri-Maltose in cow's milk and water formulas will do much toward preventing the occurrence of a fermentative diarrhoea. This is because of its greater assimilation limits (7.7 as against 3.1 and 3.6 for lactose and cane sugar respectively).

A carbohydrate so easily assimilated is, when used with cow's milk and water formulas, the greatest assurance against nutritional disturbances caused by sugar intolerances. For this reason it is used with good results in feeding the majority of well infants, and for the same reason it is invariably the clinical indication in cases of infants with weakened powers of digestion,—those manifesting *the end results* of unsuitable carbohydrate additions to their diets.



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On the second floor are units also for nine dentists. These departments were designed by the Ritter company of New York. Each dental office unit has a waiting room, private laboratory, two operating rooms and a small X-ray room. All of the units are fitted with the Ritter equipment, compressed air, gas, electricity, water and waste. The dentist supplies his chair and instruments. Sinks and sterilizers are arranged for the same as in the offices for the physicians.

The Putnam County Medical Society held its regular monthly meeting in February at the James Hotel, Palatka. The invited guests were Drs. Robert McIver, W. McL. Shaw, S. G. Thompson, and Shaler Richardson of Jacksonville. The following program was presented: "Abdominal Tumors," Robert McIver; "Some Practical Considerations of Squint," Shaler Richardson; "Gastro Intestinal X-ray Diagnosis," Dr. W. McL. Shaw.

This organization has recently been formed and its members are full of enthusiasm for the carrying on of organized medicine in Florida. The following members attended the meeting: Drs. Z. Brantley, Grandin; E. W. Ford, and C. P. Youmans, Crescent City; L. Woerner, Interlachen; John T. Hosey, W. S. Miller, D. Y. Rosborough, S. B. Strong, E. W. Warren and G. M. Zeagler, of Palatka.

* * *

At a recent meeting of the Seminole County Medical Society, the following officers were elected for the ensuing year: G. S. Selman, Sanford, president; C. M. Mitchell, Sanford, vice-president; J. T. Denton, Sanford, secretary-treasurer.

* * *

The Lake County Medical Society met in regular session at the Fountain Inn, Eustis, Thursday evening, February 2nd, and on this occasion, acted as hosts for the members of the Central Florida Medical Society. Thirty physicians and wives were present. Dr. H. H. Harris of Jacksonville presented a paper on "Cardio-Vascular Syphilis" and Dr. E. C. Taylor of Howey, a paper on "Therapeutic Possibilities of Citrus Fruit."

* * *

The Suwannee River Medical Society, at its regular meeting in Lake City on February 10, was entertained at the Government Hospital and

(Continued on page 482)

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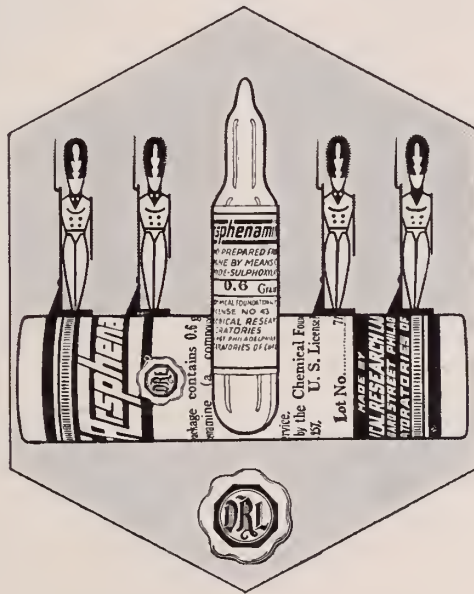
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was the guest of the Medical Staff of the hospital.

Dr. T. S. Anderson, president of the society, presided. After dispensing with the regular routine business, he turned the meeting over to Dr. H. C. Von Dahm, Medical Officer in charge of the hospital, who acted as Master of Ceremonies, and, together with his staff, presented several interesting clinics.

The Association adjourned to meet in Jasper the second Friday night in March.

The following doctors were present: A. L. Blalock, Eustace Long, George O. Davis, Madison; R. B. Harkness, L. M. Anderson, T. H. Bates, P. C. Farnell, W. M. Ives, Elinor Hart-hill, Lake City; T. S. Anderson, H. M. Strickland, W. C. White, Live Oak; F. A. Brink, Jacksonville; J. R. Bruce, Jasper; D. E. Cline, Wellborn; R. E. Dicks, Dowling Park; R. A. Barnett, D. N. Cone, White Springs; H. C. Von Dahm, E. A. Welch, J. D. Gable, Herbert Caldwell, J. H. Dyer, A. E. Rogers, I. A. Black, Frank Knox, P. A. Tatum and L. J. Arnold, U. S. Veterans' Hospital.

* * *

At the recent organization of the staff of the Alachua County Hospital in Gainesville, Dr. M. H. DePass was elected chief of staff and Dr. J. L. Summerlin was named as secretary. The staff was organized into the following groups:

Group No. 1—Dr. M. H. DePass, Dr. Snow, Dr. S. T. Trice.

Group No. 2—Dr. G. C. Tillman, Dr. S. D. Rice, Dr. W. Lassiter.

Group No. 3—Dr. W. C. Thomas, Dr. B. T. King, Dr. W. T. Elmore, Dr. D. T. Smith and Dr. J. L. Summerlin, eye, ear, nose and throat specialists. Dr. J. H. Colson and Dr. J. H. Hodges will act as consultants.

The following doctors over the county will act as consultants:

E. L. Biggs and W. B. Parks, of Starke; B. M. Bishop, and J. H. Twiggs, Archer; I. A. Daily, Micanopy; G. M. Floyd, Hawthorne; S. P. Getzen, Newberry; J. A. Goode and D. C. Witt, Alachua; C. R. Gray and L. R. Weeks, Trenton; E. F. Preston, Melrose; C. L. Pridgeon, Waldo; G. W. Sherouse, Campville; J. W. Turner, Cedar Key; S. L. Turner and J. M. Willis, Williston; W. C. Young, Chiefland, W. E. Whitlock and D. P. Weeks, High Springs, and O. B. Hazen, Iacrosse.

(Continued on page 484)

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* * *

The Phi Chi medical fraternity recently held a banquet at the Hotel George Washington in Jacksonville. Twenty-four alumni of the fraternity are in Jacksonville. The meeting was well attended.

* * *

Dr. I. M. Hay, formerly of St. Augustine, recently leased the Crenshaw Hotel at Melbourne where he expects to operate a private hospital. He will have associated with him on the hospital staff Drs. I. F. Bean and I. K. Hicks, of Melbourne.

* * *

Dr. S. B. Sory has recently taken over the duties of city health officer of Lake Worth, succeeding Dr. W. S. Aldrich.

* * *

The Palm Beach County Medical Society was honored at its regular meeting, February 13, by the presence of Dr. L. G. Rowntree of the Division of Medicine, Mayo Clinic. Dr. Rowntree spoke on "Recent Advances in Medicine" with particular reference to the function of organs in disease. Some of the newer ideas were illustrated with slides. The results of study of many types of liver disease were discussed and the presentation of the subject was greatly appreciated by the society.

* * *

The Volusia County Medical Society held its February meeting at New Smyrna. Dr. J. B. Davis, of Daytona Beach read a paper, the title of which was "Middle Ear Diseases." The next meeting will be held at Daytona Beach.

* * *

Dr. F. L. Fort, of Jacksonville, orthopedist for the State Board of Health recently held an orthopedic clinic at the Court House in Panama City.

* * *

Dr. W. W. Farnell, of New Smyrna, died February 22, as a result of injuries sustained in an automobile accident near New Smyrna. Mrs. Farnell, who was in the automobile with him, also suffered serious injuries.

(Continued on page 486)

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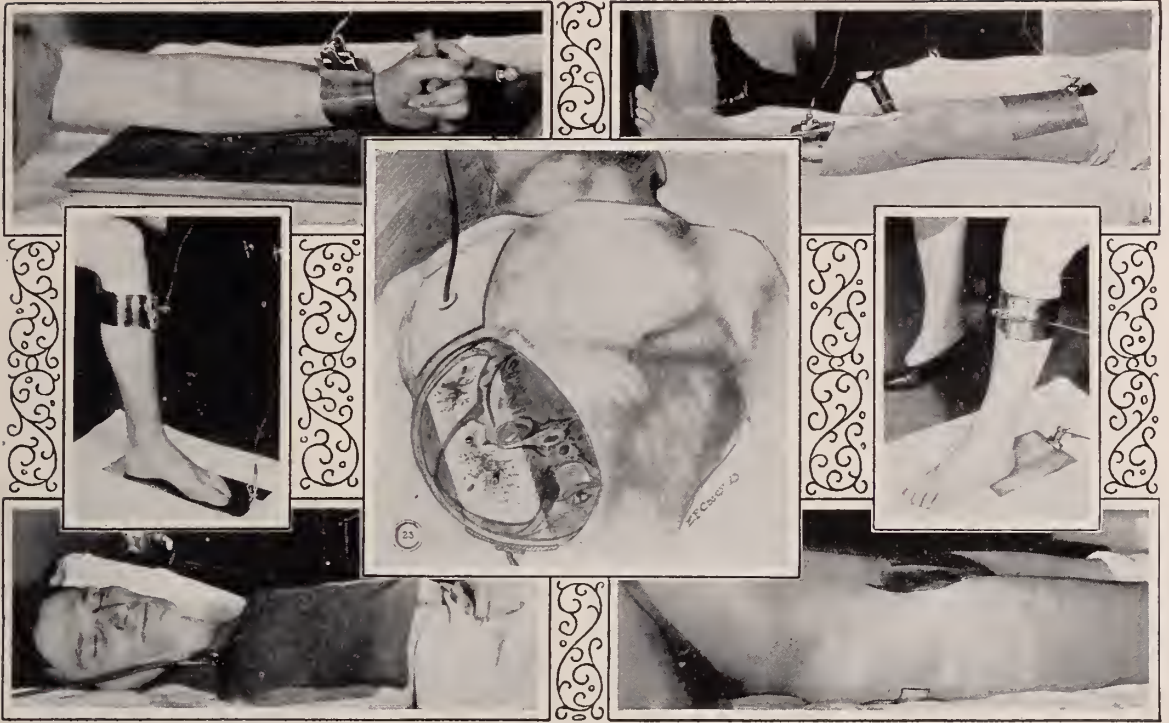
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Dr. Daniel H. Simmons was born at Enterprise, Alabama, March 10, 1852, and received his preliminary education there. He graduated in medicine from the University of Alabama, in 1895, and since that time has continuously practiced his profession. Dr. Simmons died at De Funiak Springs, his home, December 16, 1927. He is survived by his wife, five daughters and one son.

J. H. PIERPONT, *Necrologist.*

Dr. S. B. Newton, 168 Seabreeze Avenue, Palm Beach, has transferred his membership from the Dade County Medical Society to the Palm Beach County Medical Society.

* * *

Dr. F. S. O'Hara has recently transferred his membership from the Palm Beach County Medical Society to the Sangamon County Medical Society, Illinois. He has resumed practice in his former location, Springfield, Illinois.

* * *

At a special meeting of the Palm Beach County Medical Society, February 7, Dr. W. D. Haggard, past president of the American Medical Association, gave a very interesting and instructive address upon "The Diagnosis and Surgical Treatment of Carcinoma of the Colon."

* * *

Dr. T. A. Blinn, of Jacksonville, was recently instrumental in the apprehending of a negro, Edward A. Hannah, who was convicted of medical malpractice. The police department of Fort Lauderdale recently wrote the Journal, expressing their appreciation of Dr. Blinn's efforts in apprehending this offender.

* * *

Dr. W. Herbert Adams, of Jacksonville, died very suddenly March 5th following a brief illness which resulted from an infection of a finger. Dr. Adams was very prominent in his profession and had for some years practiced his specialty of ophthalmology in Jacksonville. Dr. Adams came to Florida from Savannah, Georgia. He had had extensive training in his specialty in this country and abroad. His wife survives him.

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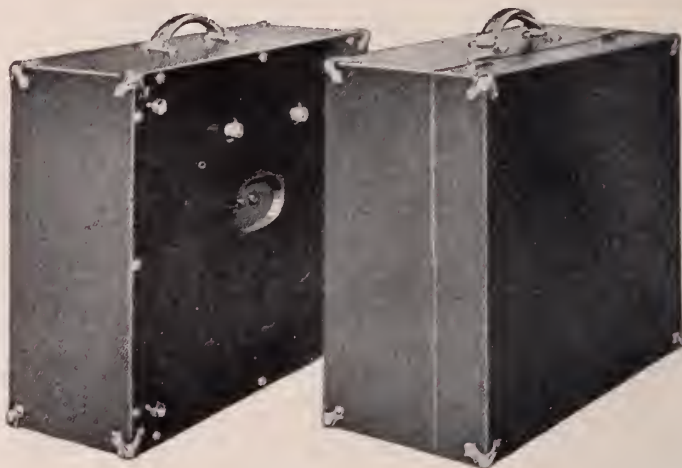
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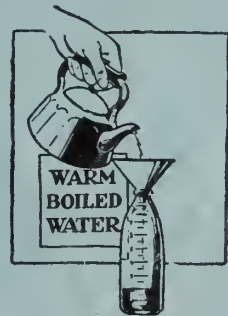


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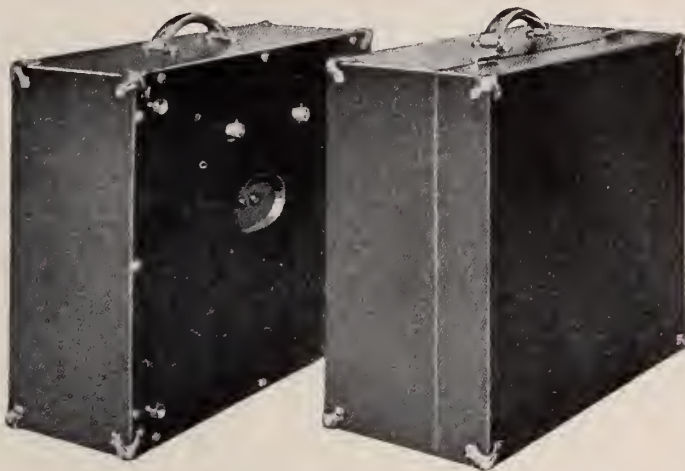
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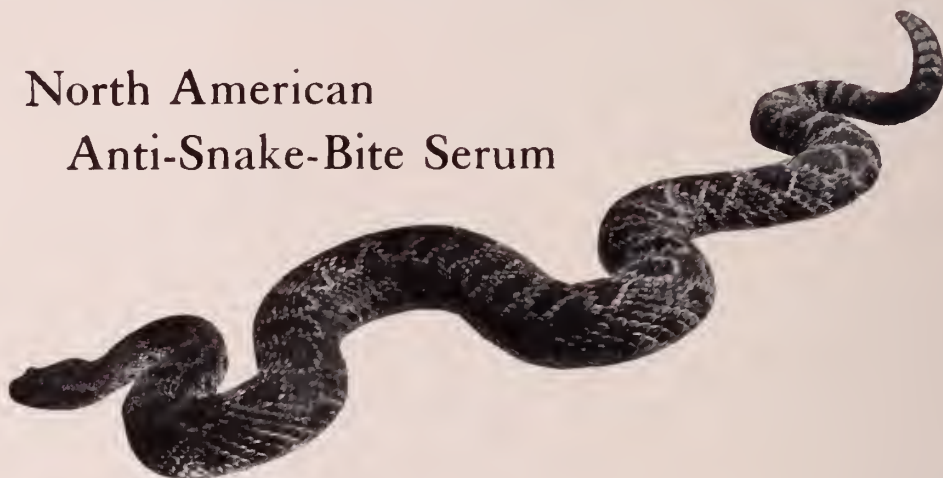
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XIV

Jacksonville, Florida, April, 1928

Number 10

President's Address*

JOHN A. SIMMONS, M.D.

Miami

Members of the Florida Medical Association.

LADIES AND GENTLEMEN:

It gives me great pleasure to welcome you to this our fifty-fifth annual session, and I have an unusual pleasure in welcoming you to this beautiful city of Tampa, where just twenty-one years ago this month I attended my first meeting of the Florida Medical Association. At that meeting, I had the pleasure of meeting a number of its members, whom I have since learned to love and respect. When I look around this morning and see so few of the faces that graced that assembly, it makes me feel sad; but this sadness is somewhat removed when I recall how faithfully and untiringly these men have worked for the welfare of organized medicine. Had it not been for this unselfish service, The Florida Medical Association would not hold the high place it does today in organized medicine. They laid a firm foundation upon which the structure of our Association could be built.

Perhaps they founded and built better than they knew; but it is one of the laws of life that those things which are not sound and right do not endure; those things which were superficial and false have crumbled away and have been lost from sight.

The foundation of real medical practice is the rock of scientific knowledge, brought to those who need its aid, through the efforts of men motivated by the ideal of great teachers of medicine. Built on such a foundation and perpetuated by such a spirit, it can not fail to remain supreme and to progress in the line laid out by our forefathers.

I feel that it is fitting that we pause for a moment to give honor to these faithful disciples of organized medicine.

I also wish to speak a word of welcome to the younger members who have more recently joined our ranks. It is on you and your efforts that the future welfare of our Association de-

pends. You are fresh from the halls of learning, are enthusiastic and, in a large measure, have your reputation yet to build. I know of no better way of starting your medical career than by taking an active interest in medical organizations, and striving to make your county and state medical societies second to none in the United States. Again, I say: "Welcome, Welcome, thrice Welcome."

When, at our last annual meeting, you honored me by electing me your president, I accepted the honor with pride, not being unmindful of the great responsibilities inherited with the office. However, with the able assistance of our efficient secretary-editor, Dr. Shaler Richardson, and our business manager, Dr. Stewart Thompson, the responsibilities have been materially reduced.

I wish to take this opportunity to thank each of you for the honor bestowed upon me, and also to thank Dr. Richardson and Dr. Thompson for their unselfish and efficient assistance in carrying on the work of our Association. Without their assistance the duties of serving you as president would have been laborious; but with it, the work has been a pleasure.

The business of the Association during the past year has been moving along in a smooth channel, with only a few ripples, which have been small, and which have been negotiated, I hope, to the entire satisfaction of all concerned.

Most of the officers and committeemen have been active and cooperative in their efforts, while a few have been more or less inactive. Especially does this apply to a few of our councilors who have failed to make a report of their activities in their respective districts, even after numerous solicitations from your executive urging them to do so. I trust that none of my hearers will interpret the above remarks in the vein of harsh criticism, but only in the spirit of looking to the betterment of our Association and organized medicine in the State of Florida.

Referring to Chapter Seven, Section Two, of our By-laws, which reads as follows:

*Delivered before the Fifty-fifth Annual Meeting of the Florida Medical Association held at Tampa, April 3, 4, 1928.

"Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district, at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district, to each annual session of the council."

Therefore, I feel that our councilors are the most important officers of our Association, and if they would live up to the duties of their offices, it would not be long before every county in our state would have an active and well organized county society, with every eligible physician enrolled as a member. Think what a glorious thing this would be, and its accomplishment is not at all impossible. Therefore, let me appeal to our next and future councilors to make this accomplishment come true.

The reports of most of the officers and committeemen appeared in the March issue of the Journal, and you can see from these reports that most of them have been active during the year, and that our Association is in a healthy condition.

We have had reported during the year, 1134 members, as against 1127 at our last annual meeting. This net gain of 7 members, we feel, is due to interest in organized medicine. While a few members have been lost a greater number has been gained and many constructive movements have taken place, while others are in the making, and we have every reason to feel proud.

I wish, also, to take this opportunity to thank all officers, committeemen and members, who have assisted in carrying on the work of our Association, and especially do I wish to thank the Scientific Program Committee for their work and cooperation in arranging the program for this annual meeting.

Soon after our last annual meeting, your Program Committee and I conceived the idea of sectioning the program for this meeting, knowing that in former years we have had two or three times as many papers submitted for presentation as could be placed on the program, and frequently authors of papers would become offended because they were not permitted to be heard. Therefore, we thought it wise to section our program, and in this way we would be

enabled to accommodate practically all who wished to be heard, and possibly in this way increase the interest in our annual meetings.

We hope that this plan may prove successful, and if so, your committee will feel proud; if not, your committee, president included, are willing to carry the burden, knowing that we inaugurated this plan because we thought it to the best interest of the Association.

DISTRICT SOCIETIES

District societies have been organized in several places during the past year, and I think when properly organized and operated have been an effective arm of medical organization.

The district society can, and should, contribute to the upbuilding of the county society and, in turn, the state association, but it should never be permitted to become a substitute for either.

It has been my privilege and pleasure to help organize one of these district societies during the year, namely, East Coast Medical Society, comprising the eleventh, fifteenth and twenty-first districts. The first meeting was held in West Palm Beach, November 10, 1927, with one hundred and five paid-up members in attendance, and I believe I can say without fear of contradiction that its scientific program was one of the best ever heard in the state, our State Association not excepted; and more than this, I am sure that this society has done more to cement the fellowship of the medical profession on the East Coast than anything previously accomplished, and I am just as positive that it has benefited every county society in its bounds, and thereby contributed to the upbuilding of our State Association. I would, therefore, suggest to the incoming councilors to consider this question seriously, and if they think wise, organize similar societies in their districts, and I firmly believe it will be found a help to the members, both socially and scientifically.

COUNTY SOCIETIES AND OBLIGATIONS OF EACH INDIVIDUAL MEMBER

There are in this State, thirty-five (35) component county societies reported as being in actual existence. As a matter of fact, a relative large number of them do not function, except as their nominal organization enables those whose names are on their rolls to hold membership in their State Association and in the American Medical Association. Some can never be maintained as efficient working bodies, but for obvious reasons must be continued. Their

members, through no fault of their own, find it impossible to maintain active organization, or even to participate with physicians in adjoining counties in the organization of joint societies. Other county societies that are practically dormant might do well to join with those of adjacent counties. Still others have memberships large enough and all conditions favorable for active and efficient operation, but seem to prefer inactivity. These exert a weakening influence that is detrimental to organization in the State and nation. The officers of the State Association are, for the most part, fully aware of this situation, and are working for its correction.

The county societies that are operating under advantageous circumstances have established high records of accomplishment during the year. Better scientific programs, better attendance at regular meetings, greater interest in professional and public welfare and a constant growing influence for good are reflected in their official reports.

The Medical Society must fulfill its great obligation in bringing together medical men and perpetuating the knowledge and ideals of our profession, and unless we can feel ourselves united as brothers in a common cause, we have lost our bearings professionally and can not but fail to live up to the responsibilities of our opportunities.

While there are countless organizations engaged in some form of medical service, the main stem of organized medicine consists of national, state and county associations. The county society is the unit: its efforts and desires, reflected in the activities of the state association, indirectly influence the whole policy of our national organization. It logically follows that organized medicine depends for its success upon the honest efforts and desires of the individual doctor to promote and perform the needful duties of his county society. The average physician is inclined to look to the national or state association for the bringing about of results, but he should look nearer home. The work of his county society, and especially of his own individual self, are the two main factors that will influence the evolutionary process in the right direction.

Every physician should resolve to let the meeting of no other organization come before that of his county society. Its field is suf-

ficiently large for the mutual, intellectual and scientific betterment of its members, and furnishes ample scope and opportunity for all efforts to improve and protect the health conditions of the community. On its walls there hangs an invisible sign, "Workers Wanted." The remuneration is intangible. It consists in that sense of satisfaction which comes to the heart of the worker through the knowledge of duty performed, which is a greater compensation to life than anything received in pay envelopes.

The obligations of the county unit increase from year to year; their liquidation is usually left to a few of the workers. These men are often referred to by the inactive members as "the inner ring," "office seekers," "political doctors," etc. Such charges are unjust. If you do not like the way your county society is being conducted, it is your privilege and duty to attend its meetings and file your objections, and if each member would do this, there would not be nearly the discord that now exists in a great many of our county societies. If you do not attend and take an active part in the deliberations of your society, then you should not criticize the actions of those who are keeping your society alive for your protection and benefit.

POLITICS AND THE MEDICAL PROFESSION

How far county and state medical societies should go into politics is a proper question.

As a rule, nothing is more disastrous to the influence of physicians than for them to go into politics as political partisans, but when there can be practical argument, either in the county membership or in the representatives in the state society, I believe we should be active and aggressive and as influential as possible for the right in all matters in which the issue is clear-cut. Outside of medical matters, the occasion does not often arise when the issues are clear-cut and above partisanship in which we can properly exert our collective political influence, but in medical matters the occasion is arising with every meeting of the State Legislature when this collective political influence is needed. In these affairs we are derelict in our duties when we do not as an organization use, as effectively as possible, our influence in medical matters that are for the public good.

We know from experience that our collective influence in these affairs, when we take pains to be intelligent, and when we are not self-seeking, has the utmost weight; that the great majority

of the public will listen to us, and that if members of the profession are sufficiently interested to advise their people in these affairs, they can carry through practically anything that they should be allowed to carry through. We fail often, but we fail usually because we do not give the subject proper attention. We have no time to inform ourselves and then to spread the information where it is needed. We do not know political methods. We are often too busy, or too little interested to make the necessary effort to exert our influence. When we fail through lack of interest, or lack of effort, we have no right to complain.

There are good and sufficient reasons why we should exert the influence of which we are capable. In the first place, we can not live up to our obligations to the public unless we exert our leadership when the public needs it. In the second place, there are subjects that concern us individually and personally, in which we should exert our influence as fully as we are able, for our own protection.

Take the question of State Board of Health appropriations, which have been reduced to the point where it has crippled the efficiency of the health work materially. For example: During the year of 1926, more was expended for Vaccine Virus alone than the 1927 appropriation allowed for all biologics. On account of this reduction in finances, the working personnel had to be reduced, as follows:

Five medical officers, four nurses, four sanitary inspectors and one assistant sanitary engineer.

It seems incomprehensible that an intelligent Governor and a group of law-makers could fail to foresee the vital necessity for maintaining the same efficient health department that has functioned in this State for so many years. Can it be possible that these men have been unmindful of the fact that the work of our efficient health department in improving the health conditions in our commonwealth has been one of the main foundations on which our State has developed so rapidly in the last few years?

The last Legislature legalized certain individuals of cults to practice the healing art by passing laws creating examining boards therefor, and these laws are so worded that a member of one of these cults in the eye of the law is practically as much a physician and surgeon as you

and I, and the sad fact is that he not only practices medicine by "pouring drugs of which he knows little into bodies of which he knows less," but practices obstetrics, gynecology, urology, and even abdominal surgery.

The question then would naturally arise, "Where is the remedy?"

This question is not easily answered, but I believe it could be answered in a large measure by securing the passage of a basic science law, which would require all applicants for license to practice the healing art to first secure a certificate in the basic sciences.

A basic science act is exactly what the title implies. It is an act that relates to the science underlying the practice of the healing art. The basic science act has nothing to do with the art of healing, except as it is an act that will determine whether an applicant for a basic science certificate is sufficiently well grounded in the basic sciences to justify his certification to a professional board to determine whether he knows how to apply those sciences in the every-day practice of the healing art.

Bear in mind then, that the function of a basic science board is in no way in conflict with the function of a professional board. It follows then that as basic science laws relate only to science and not to art, the proper agency for the execution and enforcement of a basic science act is not a professional body, but rather a scientific body. By bearing this in mind, we can reconcile ourselves, if need be, to the examination of physicians along with osteopaths, chiropractors and others, in the basic sciences, by a non-medical body.

We believe that our own medical examining board determines sufficiently the fitness of our own applicants in the basis sciences, but we can hardly undertake to ask for the establishment of a basic science act that will require examinations of only sectarian practitioners and let our own people go free. To get the act we must subject all to the same qualifications.

The basic science board can proceed to give an independent examination in anatomy, physiology, chemistry, pathology and other branches that are usually referred to as basic sciences. If the applicant passes a satisfactory examination before this board, then he is entitled to apply for an examination before one of the professional boards, but not until then.

It seems to me that if we had such a board in our State, it would go a long way in remedying the deplorable conditions now existing. With the above facts known by us, do you not think it high time for our county and state societies to enter politics? My answer would be in the affirmative.

This coming summer and fall is general election year, and I think that each of us should determine to go home, see our prospective senators and representatives and let them know of the deplorable condition in our State in the matter of much needed medical legislation. If we go about our task in an unbiased way, we are bound to get results.

PUBLIC AND PERIODIC HEALTH EXAMINATIONS

The subject of public health and periodic health examinations is a large one; in fact, entirely too large to be covered by an address of this character, but I would not feel right to pass them by unnoticed. Therefore, I wish to mention only a few of the most salient points for your consideration. Taking a leaf here and a leaf there from the experience of a number of organizations, one can outline a plan of procedure which, it is believed, can be used effectively by many county medical societies for promoting this work.

One or two meetings of the county society each year should be devoted to a discussion of these subjects, the discussion to be given by a physician who is thoroughly enthusiastic about the matter and has had considerable experience. He should follow his discussion of the subject with a demonstration of how to conduct such an examination, and especially how to summarize the findings and to give advice (in writing) to the health client in such a way as to impress him of its importance and, lastly, to insure, as far as possible, that the advice so given will be followed.

Lecturers and demonstrations may be secured from within or without the State. A considerable number of physicians in the large cities, especially of the staffs of the best hospitals, have become interested in this movement, have had experience in speaking and giving demonstrations and are willing to make occasional visits to medical societies away from home. One or more talks, either by local physicians, or others representing the county medical society, should be given before the Rotary Club, Kiwanis and other organizations. The report of these

talks, if properly written up and published, is certain to stir up a good many of the citizens to the importance of this activity. By such a procedure, the demand for this work is brought about by the activity, not of the physicians themselves, but by lay organizations, and the implication that the physicians are promoting this movement for their own aggrandizement is, in a large measure, avoided.

There is, already, widespread and rapidly growing public interest in such matters. They are being discussed daily in health columns in some newspapers and magazines, in radio talks, in health lectures and in other ways by all sorts of actual and would-be health educators. Leadership in this movement belongs to the medical profession, by virtue of the special knowledge and training of the physician in preparation of his vocation. The medical and health education of the public has already been undertaken in many communities by the organized medical societies, State and local, but this effort should be much more widely extended. It is of necessity a job for the organized medical profession, as signed health articles in the press, platform and radio talks, health exhibits and demonstrations can seldom be undertaken by the individual physician, without his being subjected to serious criticism by his fellow practitioners.

One of the most necessary and fruitful activities of the county medical society is the dissemination of useful, authoritative information about live health topics in language which is intelligible to the non-medically educated reader.

Another vitally important thing is that the physician should be ready to give a reasonable, thorough, careful and worth-while examination when the client calls for it. This is, however, only the first step and must be followed by advice to the client as to his health habits and conduct. This advice should have to do not only with his personal welfare, but also with that of his family and with that of other persons in the community in which he lives.

The mere physical examination, no matter how thorough, accurate and comprehensive, is of little value unless it is supplemented by information as to what steps need to be taken to bring about the maintenance and the betterment of the health of the client, of his family, and of others.

In no other way can advice and instructions

be so effectively given as in the intimate face to face contact of the doctor and his client in the privacy of the physician's office, or of his client's home. The best physician, the family doctor, has always served his patients as health adviser, not only as to what the patient should do to alleviate or cure the condition for which he consults the doctor, but also as to other matters which were conducive to his continued well-being and efficiency. His opportunity to do this has heretofore been largely confined to those persons who have consulted him for the relief of pain, distress or some other symptom of departure from health. Now that the custom of seeking a health examination is becoming established, it will bring to him a large and increasing number of persons, believing themselves to be healthy, and in this way enable him to detect

a number of abnormal conditions in their incipency, thereby being the means of saving many lives annually; especially will this apply to the two great plagues—tuberculosis and cancer.

No fee has yet been set for these examinations. It is thought that this should be left either to the examiner, or to the local medical society. It is perfectly obvious that it must be adjusted to the economic conditions prevailing in each particular community. If the fee charged is too high, people will not seek this advice; if it is too low to enable the doctors to give the time necessary to make reasonable, thorough examinations, the clients will soon discover that they are not getting value received, and the movement will fail.

PROCEEDINGS

of the

FIFTY-FIFTH ANNUAL MEETING

of the

FLORIDA MEDICAL ASSOCIATION, Inc.

HELD AT TAMPA, FLORIDA

APRIL 3rd and 4th, 1928

The Fifty-fifth Annual Meeting of the Florida Medical Association was called to order at 10 a. m. in the Municipal Auditorium at Tampa by Dr. H. Mason Smith, chairman of the Committee on Local Arrangements. The invocation was rendered by the Reverend Howard J. Brazelton, pastor of the First Christian Church of Tampa. An address of welcome on behalf of the Hillsboro County Medical Society was given by Dr. R. C. Hubbard, president. An address of welcome on behalf of the city of Tampa was given by Honorable D. B. McKay, mayor, followed by a response on behalf of the Florida Medical Association by Dr. G. H. Edwards of Orlando. Dr. John A. Simmons of Miami then delivered the annual address* of the president. Dr. George W. Crile of Cleveland, Ohio, having been invited to address the General Assembly, spoke on "Factors Which Control the End Results of Operations on the Gall Bladder and

Thyroid Gland." Demonstrations of his subject were made by lantern slides. This concluded the first General Session of the meeting.

SCIENTIFIC SESSION—SECTION ON MEDICINE

At 2 p. m., April 3rd, the Medical Section of the Scientific Program convened and the following papers were read and discussed:

"Treatment of Tuberculosis," W. A. Claxton, Miami.

"Sporadic Typhus-Brill's Disease—Report of Two Cases," T. H. Bates, Lake City.

"Gastric Hyperacidity, Its Recognition, Causes and Management," Marvin Smith, Miami.

"Experience and Treatment of Rattlesnake Bites Before and After the Antivenum Serum Had Been Discovered," H. Gates, Bradenton.

"Cost of Remedial Defects in Our School Population," M. B. Herlong, Jacksonville.

"Malaria and Dengue," A. L. Blalock, Madison.

*The President's Address will be found on page 505.

SCIENTIFIC SESSION—SECTION ON SURGERY

At 2 p. m., April 3rd, the Surgical Section of the Scientific Program convened and the following papers were read and discussed:

"Surgery of the Upper Right Quadrant of the Abdomen," H. A. Walker, Hollywood.

"Observations Concerning the Duodenum," Howard D. Van Schaick, Jacksonville.

"Roentgen Observation of Duodenal Lesions," Bundy Allen, Tampa.

"Surgical Treatment of Duodenal Ulcer," Ralph Gowdy, Miami.

"Foreign Bodies in the Urinary Bladder," Gideon Timberlake, St. Petersburg.

"Instrumentation and Operative Technique, with Post Operative Results of Electro Enucleating Tonsillatome," F. Peter Herman, West Palm Beach.

"Gas Anesthesia," W. E. Van Landingham, West Palm Beach.

SECOND GENERAL SESSION

The Second General Session convened in the Music Room of the Tampa Bay Hotel, at 5 p. m., April 3rd, and was called to order by the President, Dr. John A. Simmons, of Miami. The following reports were submitted:

REPORT OF
SECRETARY, TREASURER, EDITOR OF
THE JOURNAL, DR. SHALER RICH-
ARDSON, AND BUSINESS MANA-
GER, DR. STEWART G. THOMPSON

*To the President and Members of the Florida
Medical Association in Session at Tampa,
Florida:*

Gentlemen:

MEMBERSHIP

The membership growth of our Association has out-reached the expectation of even the most enthusiastic of the officers. The paid members for the calendar year 1926, as reported

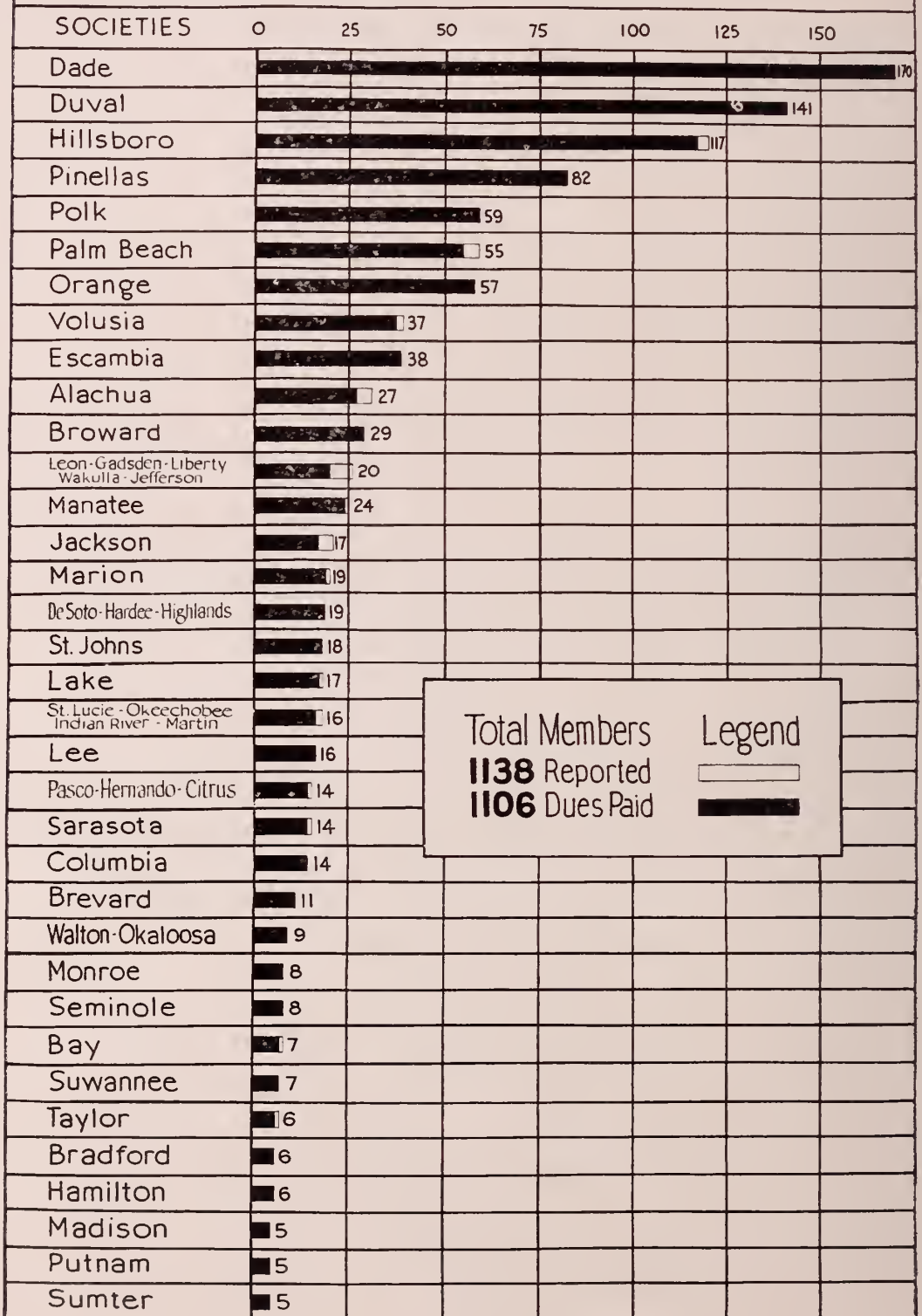
FLORIDA MEDICAL ASSOCIATION, INC.

Total members who have paid state dues
∞ 1918 to 1927 inclusive. ∞

Year	Total	Members					
		0	200	400	600	800	1000
1927	1106						
1926	1018						
1925	645						
1924	536						
1923	482						
1922	271						
1921	545						
1920	524						
1919	396						
1918	409						

FLORIDA MEDICAL ASSOCIATION, INC.

Total Reported and Paid Members by Societies -- 1927



at the West Palm Beach meeting, totalled 1,018. For the calendar year 1927, there was a paid membership of 1,106 and a total of 1,138 members on the roster. In the entire state, there are only 32 members who did not pay their 1927 state dues and of this number, a few have been accounted for since the closing of the books.

Please note the chart showing membership growth by years, 1918 to 1927, inclusive. In our last year's report, after considerable research work, membership records were brought up to date beginning with 1918. This information is all contained in the April, 1927, Journal. The strength of the Association depends entirely on the strength of individual component societies. The activity and enthusiasm of the component societies is evidenced by the steady increase of membership as indicated on the rosters received from the secretaries. Dade County, with 170 members, every one having paid state dues, leads the Association as the largest unit. Duval County lost first place and for the past two years has taken second place. The financial statement of 1928 shows Duval County in first place with 133 paid members; Hillsboro second with 83; Pinellas third with 82, and Dade County fourth with 78. Unless state dues are received from members in arrears before December 31st, 1928, the chart showing membership by component societies will present quite a different picture from the one contained in the 1927 report. However, if the usual enthusiasm is kept up by the Dade County Medical Society, it will be difficult to keep them out of first place.

MEMBERSHIP AND FELLOWSHIP—AMERICAN MEDICAL ASSOCIATION

The membership of the American Medical Association is composed of those physicians who are members in good standing of county medical societies and state medical associations. It is not possible to hold membership in the American Medical Association unless membership is maintained in county and state organizations. Those members who are in good standing in their county society and state association automatically, without financial assessment, become members of the American Medical Association. This matter does not seem to be clear to our entire membership. For the benefit of those who are not familiar with this procedure, the following quotation is given from the American Medical Association Bulletin of November, 1927:

"There are no dues paid to the American Medical Association except those paid by its Fellows. Members of the Association who have not qualified as Fellows pay no dues except those paid to their county societies and state associations. All Fellowship dues are paid directly to the American Medical Association and not to or through the county or state secretary, except in very rare instances where he transmits the payments as a matter of accommodation."

DOCTORS' ANNUAL REGISTRATION LAW

Dr. H. Mason Smith, in an editorial appearing in the Journal of September, 1927, outlined the provisions of a law passed by the last Legislature, requiring annual registration. The burden of this registration work has fallen to the State Board of Health. Application blanks were mailed out the first of October, 1927. From that date to the end of March, a total of 1,077 physicians have filed applications for Certificates of Registration. There is a total of 1,138 members in our Association which plainly indicates that the registration is not yet complete. Within the next year or two, it will be possible to make a definite statement as to the number of doctors who are licensed to practice medicine within the boundaries of this State. A record of each doctor as approved by the Board of Medical Examiners will be on file, making it possible to check all doctors who are not members of organized medicine and through the councilors and county medical societies, bring into the Association all who are eligible for membership.

COUNTY SOCIETIES

The increase in membership, papers published and Journals printed is largely due to the enthusiastic efforts of the county medical societies. The state Association has grown very rapidly during the past two years as may be noted by financial statements and charts. Every component society appears to be active at the present time and there is more good fellowship among the members of the Association than has been evidenced during any previous year. During the year, one county society was organized and a formal application for charter filed—Putnam County.

FINANCES

A proposed budget was submitted to carry on the work of the Florida Medical Association, June 29, 1927. This budget was approved

by the Executive Committee. The total expenditures for the entire year are well within the provisions made in the budget.

No unusual indebtedness has been incurred against the Association. Careful business methods have been followed in all transactions; bids have been taken on all purchases and every effort put forth to handle the financial affairs of the Association as wisely and economically as possible. The audited report of our books up to and including March 23, 1928, shows a balance of \$12,874.77. There are no outstanding obligations except those created since March 23rd, when the books were closed for audit. The Association is now in such financial condition that certain very definite needs can be realized: (1) a medical defense fund should be provided; (2) a definite sum should be set aside each year for legislative purposes.

The following financial statement, together with report of Mucklow and Ford, certified public accountants, is submitted for your approval.

MUCKLOW & FORD & McCALL
Jacksonville, Florida
March 29, 1928

DR. SHALER A. RICHARDSON,
Treasurer, Florida State Medical Association,
Jacksonville, Florida.

DEAR SIR:—This is to certify that we have examined the attached statements of cash receipts and cash disbursements for the period from March 22, 1927, through March 23, 1928. These statements have been prepared by Dr. S. G. Thompson, business manager of the Florida Medical Association, and the Florida Medical Journal, and correctly reflect the total amounts received and disbursed as shown by the books.

We also checked the total amount collected from members, and the total amount of unpaid dues, as shown by the statement with the books, and found them to be in agreement.

Cancelled checks were examined and compared with the entries in the cash disbursement books; cash books were added and all postings checked to the general ledger; and the general ledger was added and a trial balance taken off as of March 23, 1928.

Bank accounts were reconciled with the bank statements.

Yours faithfully,

MUCKLOW & FORD & McCALL.

By George H. Ford, C. P. A.

Member, American Institute of Accountants.

CONSOLIDATED CASH STATEMENT March 31, 1927, through March 23, 1928.

<i>Receipts</i>	
Cash in Bank, March 21, 1927.....	\$8,596.27
Dues Collected (Exhibit "C").....	\$9,945.00
Earnings from Advertising (Exhibit "D")	4,522.78
Subscription and Miscellaneous Sale of Journal	24.00
Bonus from Cooperative Medical Advertising Bureau	196.75
Sale of Safe	50.00
Interest on Savings Accounts.....	119.35—14,857.88
Total Cash to be Accounted for.....	\$23,454.15

Disbursements

General Fund, Expenses (Exhibit "A")	\$3,295.42
General Fund, Refund of Dues (1927-1928)	100.00—3,395.42
Journal Expense (Exhibit "B").....	7,175.46
Library	8.50—10,579.38
Balance in Bank, March 23, 1928.....	\$12,874.77

Exhibit "A"

CASH STATEMENT—GENERAL FUND

March 21, 1927, through March 23, 1928

Receipts

Cash as per last audit.....	\$ 11,853.91
Back Dues Collected (Exhibit "C")	\$2,075.00
Current Dues Collected (Exhibit "C")	7,870.00— 9,945.00
Interest on Savings	119.35
Sale of Safe	50.00

Total Cash to be Accounted for..... \$21,968.26

Disbursements

Salaries	\$1,908.76
Secretary-Treasurer Salary	600.00
Postage	87.08
Supplies	60.70
Telephone and Telegraph	26.67
Convention Expense	266.32
Incidental Expense	17.00
Auditing Expense	13.00
Bond of Treasurer.....	8.75
Legal Fees	307.14—3,295.42
1927 Dues Refunded	20.00
1928 Dues refunded	80.00— 100.00
Library (Binding of Journals).....	8.50
To Journal Fund (\$3.00 per member, paid, 1927 and 1928 collections) ..	2,985.00— 6,388.92

Cash Balance

\$15,579.34

EXHIBIT "B"

CASH STATEMENT—JOURNAL FUND

March 21, 1927, through March 23, 1928

Receipts

As per last Audit (Overdraft).....	—\$3,257.64
Earnings from Advertising (Exhibit "D")	\$4,522.78
Subscription and Miscellaneous Sale of Journal	24.00
Bonus from Cooperative Medical Advertising Bureau	196.75
From General Fund	2,985.00— 7,728.53

Total Cash to be Accounted for..... 4,470.89

Disbursements

Salaries	\$1,953.84
Editor's Salary	600.00
Postage	154.68
Printing of Journal	4,352.20
Supplies	1.55
Telephone and Telegraph	16.61
Electrotypes	22.70
Auditing Expense	13.00
Convention Expense	39.73
Bond of Treasurer	8.75
Incidental Expenses	12.40— 7,175.46
Balance—Overdraft	—2,704.57
Plus Balance General Fund.....	15,579.34

Net Cash Balance in Bank.....\$12,874.77

Exhibit "C."

DUES COLLECTED MARCH 21, 1927, THROUGH MARCH 23, 1928							
Name of Society	Total Members	No. Paid Members	No. in Arrears	1928 Dues Collected	1928 Refunds	1927 Dues Collected	1927 Refunds
Alachua	31	23	8	\$ 220.00	\$	\$ 130.00	\$
Bay	7	7	0	70.00	10.00	10.00	.....
Bradford	6	3	3	20.00	.....	.....	.....
Brevard	14	10	4	100.00	10.00	10.00	.....
Broward	27	17	10	160.00	.....	50.00	.....
Columbia	11	11	0	100.00	.....	10.00	.....
Dade	169	78	91	770.00	.....	560.00	.....
DeSoto-Hardee-Highlands	17	13	4	120.00	.....	30.00	.....
Duval	145	133	12	1,330.00	10.00	.....	10.00
Escambia	38	30	8	290.00	.....	90.00	.....
Hamilton	6	0	6	.....	.....	.....	10.00
Hillsboro	122	83	39	820.00	.....	340.00	.....
Individuals	3	0	3	.....	.....	30.00	.....
Jackson	18	17	1	160.00	.....	60.00	.....
Lake	15	11	4	100.00	.....	40.00	.....
Lee	17	3	14	30.00	10.00	20.00	.....
Leon-Gadsden-Liberty- Wakulla-Jefferson	28	27	1	260.00	.....	80.00	.....
Madison	5	5	0	40.00	.....	.....	.....
Manatee	23	17	6	160.00	.....	20.00	.....
Marion	19	14	5	130.00	.....	70.00	.....
Monroe	7	6	1	50.00	.....	40.00	.....
Orange	51	24	27	230.00	.....	40.00	.....
Palm Beach	54	38	16	370.00	.....	140.00	.....
Pasco-Hernando-Citrus	14	14	0	130.00	.....	20.00	.....
Pinellas	82	82	0	810.00	.....	—10.00	.....
Polk	59	27	32	260.00	.....	.....	.....
Putnam	12	10	2	100.00	10.00	55.00	.....
St. Johns	16	16	0	160.00	10.00	—10.00	.....
St. Lucie-Okeechobee-Indian River-Martin	18	11	7	110.00	10.00	50.00	.....
Sarasota	15	13	2	120.00	.....	20.00	.....
Seminole	14	13	1	120.00	.....	.....	.....
Sumter	5	3	2	30.00	.....	30.00	.....
Suwannee	7	7	0	70.00	10.00	10.00	.....
Taylor	6	6	0	50.00	.....	10.00	.....
Volusia	40	32	8	310.00	.....	130.00	.....
Walton-Okaloosa	8	8	0	70.00	.....	.....	.....
Totals	1,129	812	317	7,870.00	\$80.00	\$2,075.00	\$20.00
				2,075.00—1927 Dues Collected.			
				\$9,945.00—Total Dues Collected.			

EXHIBIT "D"—EARNINGS FROM ADVERTISING

March 21, 1927, through March 23, 1928.	
April, 1927	\$ 271.90
May	290.69
June	519.27
July	496.10
August	186.66
September	583.37
October	221.54
November	308.57
December	448.75
January, 1928	299.71
February	215.56
March	680.66
	<u>\$4,522.78</u>

ASSETS AND LIABILITIES

March 23, 1928

<i>Assets</i>	
Cash in Bank	\$ 2,755.42
General Fund—Accounts Receivable.....	3,170.00
Journal—Accounts Receivable	533.00
Furniture and Fixtures (less depreciation)....	74.41
Stationery Inventory	53.75
Library	48.00
Savings Acct.—Florida National Bank.....	5,044.03
Savings Acct.—Atlantic National Bank.....	5,075.32
	<u>\$16,753.93</u>
<i>Liabilities</i>	
Capital Account	\$16,753.93

ADVERTISING

A year ago, we reported that the revenue from the advertising in the Journal had increased rapidly and that well over \$1,000.00 additional had been received from this source, and from every indication, the peak had been reached. During the past year, however, \$4,522.78 has been collected from advertisers as compared with the total of \$3,556.41 for the previous year; subscriptions and Journals sold during the year, \$24.00; bonus on advertising from the Cooperative Medical Advertising Bureau, \$196.75, makes a total income from the Journal of \$4,753.53. The past year has been prosperous and the financial record established is, without a doubt, a record that will be hard to reach in the near future. The first of this year has not started out as well as last. A number of advertisers did not renew their contracts because of business conditions. The members of our Association should patronize Journal advertis-

ers whenever possible. Help from our members in selling new advertising contracts will be very much appreciated. It is a financial impossibility to visit every city and solicit advertising. However, each county society could contribute a very valuable service to the Journal and to the state Association by influencing local firms to advertise in the Journal. All advertisements are submitted for approval and unless the advertiser is worthy of a place in the Journal, his money is refunded.

JOURNAL

Owing to the great number of papers submitted for publication, it is suggested that a publication committee be appointed each year by the incoming president to work in conjunction with the Editorial Staff in selecting those papers that are to be published.

Two more back volumes of the Journal have been completed and bound during the past year. An appeal was made through the columns of the Journal for missing numbers and through the cooperation of Dr. F. J. Walter of La Mesa, California, a past president who still maintains membership in our Association, enough back numbers of the Journal were secured to complete volumes 7 and 8, for the years 1920-1921 and 1921-1922. The file of Journals is not yet completed and we are still appealing to you for back numbers as follows, in order that the State Association may have access to a complete file of Journals:

- 1914—all issues
- 1915—all issues
- 1916—all issues
- 1917—all issues
- 1918—March
- 1919—August, November
- 1920—February

The Journal is growing rapidly both as to material submitted and copies required. There are forty-four (44) papers on hand ready to print and the forty-two (42) papers read at this, the Fifty-Fifth Annual Meeting, will have to be added, making a total of eighty-six (86) papers now available. The cost of printing is quite an item and for that reason, we have endeavored to hold the size of the Journal to forty-eight (48) pages and cover. On a number of occasions, however, the Journal has been increased to fifty-two (52) or fifty-four (54) pages. There was a time in the history of the

Association when material for the Journal was not always in sight and the fact that there is more material now than can possibly be used without a considerable increase in the size of the Journal is a very good index to the interest the membership is taking in the affairs of the State Association.

* * *

Dr. Thompson and I wish to thank the members of the Florida Medical Association for their whole-hearted cooperation in carrying on the work of our office, for it has been by this means alone that our organization and its Journal have continued to flourish for another year.

Respectfully submitted,

SHALER RICHARDSON,

Secretary, Treasurer and

Editor of the Journal.

STEWART G. THOMPSON,

Business Manager.

On motion, this report was adopted by unanimous vote.

The report of the Executive Committee was then presented by Dr. R. H. McGinnis, Chairman, Jacksonville:

REPORT OF EXECUTIVE COMMITTEE

Members of the Florida Medical Association:
Gentlemen:

Your Executive Committee reviewed and approved the budget submitted by the Business Manager and the Secretary-Treasurer of the Florida Medical Association and Editor of the Journal for the year 1927-1928.

The salary of the Business Manager was authorized increased \$500.00 a year. Dr. Shaler Richardson's salary as secretary, treasurer and editor of the Journal (which he has refused to accept for the past two years) was authorized to be paid, beginning April, 1927.

At the request of the Committee on Arrangements, the date of the Tampa convention, which will be the fifty-fifth, was approved as April 3d and 4th, 1928.

The opening of savings accounts in two of the national banks was authorized.

The question of "members in arrears" was brought up and a ruling made authorizing the business office to drop a name from the state roster after the annual meeting; provided the

dues of the previous year and the period from January 1st to the date of the annual meeting had not been paid. This ruling provides that a member will receive the Journal of the Florida Medical Association for one year and from January 1st to the date of the annual meeting of the second year even though dues are not paid, unless instructed to the contrary by the individual or his county society.

The arranging of advertising matter through the back of the Journal in connection with the state news items was approved. This will be to the interest of our advertisers.

Your committee also approved a classified ad department. A 50-word minimum advertisement will be sold at \$1.50 with a rate of 3c for each additional word. The ads will be run following the news items.

The expense of publishing the Florida Medical Journal has increased during the past year due to larger number of articles printed and greater circulation. The editors of the Journal are men of ability and publish it with reasonable expenditure. From evidence submitted from outside authoritative sources your committee is satisfied that the Journal is, to say the least, the average of state medical publications of the country. To maintain the quality of the Journal your committee recommends that the dues of the State Association remain as they are at present.

Several communications from Dr. H. Mason Smith, president of the Association last year, and Mr. A. T. Stuart, attorney, of Tampa, Florida, relative to a statement of Mr. Stuart of \$1,500.00 for services rendered to the Association in drafting a bill, which was enacted into law by the 1927 Legislature, was reviewed by the chairman of the Executive Committee. Since there was a controversy between Dr. Smith and Mr. Stuart relative to the amount of the indebtedness for the service, your chairman did not submit the correspondence to the other members of the Committee. This matter, anyway, would have to be settled by the House of Delegates.

Respectfully submitted,

R. H. McGINNIS,
Chairman
G. RAPP,
L. M. ANDERSON.

On motion, the report was adopted by unanimous vote.

The report of the Committee on Legislation and Public Policy was presented by Dr. W. M. Rowlett, chairman, Tampa.

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY

Your Committee begs to report that it has had a year of activity.

Its two major achievements were that of having passed by the last legislature a bill requiring the annual registration of all who practice the healing art, and having certain amendments made to the Medical Practice Act which increased the powers of the Medical Examining Board.

We feel that with the enactment of the annual registration law, the State Medical Association, The State Board of Health, and the Board of Medical Examiners, will have a greater opportunity to get first-hand information relative to those practicing the healing art which will aid materially in curbing the illegal practitioner. However, we caution organized medicine against being over-confident of the benefits that are to be derived from the above legislative enactments. While we are concentrating our efforts and attention to our own house-cleaning, the so-called "drugless healer" is enlarging his scope of activity without enlarging his medical knowledge and educational requirements. He's ever on the alert to spread propaganda and strengthen his position, and is quick to wedge in when the opportunity presents itself. This was clearly illustrated at the last legislature—while rejoicing over our own success in getting our desired bills through, the osteopaths took advantage of a strategical moment to have enacted a law giving them all the privileges of an M. D.

Only a few years ago the osteopaths were claiming that they did not use drugs, or perform surgical operations, and not being physicians, or practicing medicine, therefore were not subject to the laws required of physicians. Today they have reversed their position and are demanding equal privileges with the physicians, though unwilling to meet higher standards of education. As a result of such activity, osteopaths are now being licensed as physicians and surgeons in Colorado, Massachusetts, Texas, California and Florida.

The act passed by the last legislature creating the State Board of Osteopathic Medical Examiners, contains the following paragraphs:

Section Seven. "Physicians and surgeons of the Osteopathic School of Medicine, are to be of equal rank and grade as the physicians and surgeons of the other three schools of medicine designated as allopathic, homeopathic and eclectic."

In Section thirteen, we find this paragraph: "Osteopathic physicians and surgeons licensed hereunder shall have the same rights as physicians, or surgeons, of other schools of medicine with respect to the treatment of cases or holding of offices in public institutions."

Thus, it is within the realm of possibility that our next State Board of Health will be under the control of the osteopaths. We ask you, "What assurance have we that it will not be?"

Another question we ask is, "Does it pay to continue to strive to protect the public from professional incompetency?" The osteopaths, chiropractors and naturopaths have had enacted liberal laws protecting them, while all that we have gained by legislation is to make it more difficult for our own educated and well-trained medical men to secure legal rights to practice in our state, apparently preserving an attractive field for the drugless healers.

While we did all that was possible to block the passage of these bills giving such wide recognition to the drugless healer, we feel that the great fault lies with the medical profession in their failure to give publicity to the dangers of such legislation, and the lack of interest that the profession has taken in politics and public affairs.

The mentioning of the latter activities, no doubt, will raise a storm of protest from the older men of our organization, but with all due respect to their rock-bound ideas on ethics and publicity, the facts speak for themselves. The old professional idea of solitude and quietness has opened the way for the brazen imposter to reach the public, and not until he has taken his well-prepared bills before a legislature, incompetent of judging, do we make any efforts to curb their activity.

The people trust their doctor as they trust no one else—they confide in him to the limit; they turn themselves over to his care, believing he is honest and capable. If he has fallen into the hands of an imposter, the medical man reproaches him for his ignorance, and leaves him at that—when in reality organized medicine is at fault. What means had the patient to know that he was not in proper hands?

Thus, your Committee recommends that organized medicine take a more active interest in politics and public affairs;

That it endeavor to devise some method whereby the public may ascertain whether a physician is a member of organized medicine or not.

We believe that the interest of the profession and the public can best be served by placing the executive office of the State Board of Medical Examiners, The State Board of Health, and the State Medical Association under one head, making same a full-time position.

The creation of a Board of Examiners on Basic Science.

Respectfully submitted,

W. M. ROWLETT, M.D.,

Chairman.

On motion, this report was adopted by unanimous vote.

The report of the Committee on Hospital and Medical Education was presented by Dr. R. O. Lyell, Miami.

REPORT OF HOSPITAL AND MEDICAL EDUCATION COMMITTEE

To Dr. J. A. Simmons, President, Florida Medical Association:

Your Committee on Hospitals and Medical Education wishes to make the following report:

We are glad to report that progress is taking place.

We now have in the State thirteen hospitals that are approved by the American College of Surgeons. We are sorry to have to report that there are but two hospitals reported on the list of approved hospitals for interns in this State. Hospitals throughout the State are gradually adding to their efficiency by installing X-rays, clinical laboratories, physio-therapy equipment, etc.

Our progress along educational lines is very limited, but our opportunities for self-education were never better than at the present time. It is true we have no medical schools or set post-graduate courses, but we must recognize the educational advantages of consultations, papers and discussions in our medical societies and the reading of medical literature in general.

We are gratified to be able to report that three of our state schools are giving pre-medical courses and more than one hundred are now preparing themselves for a medical education.

Considering the foregoing facts we recommend:

(a) That more hospitals make the necessary improvements and comply with the requirements of the American College of Surgeons; and particularly urge that more hospitals meet the requirements of the American Medical Association to become registered as approved hospitals for interns.

(b) That physicians use every opportunity to inform the laity as to the advantages of well-equipped hospitals.

We also recommend as a means of education that no opportunity be lost in the thorough study of each patient, consultation when needed, autopsies when obtainable, regular attendance upon medical society meetings, and the reading of medical literature.

In view of the fact that we have more than one hundred taking the pre-medical course and that we have no medical schools, we recommend that the question of establishing a state medical school be taken under consideration. The time, possibly, is not ripe for a medical school, but it is not too soon to begin to consider this important matter, nor too soon to begin to work with that end in view.

Respectfully submitted,

R. O. LYELL,
J. B. FARRIOR,
JOHN E. BOYD,

On motion, this report was adopted by unanimous vote.

The chairman, Dr. John A. Simmons, then stated that during the pre-convention meeting of the officers, committees and councilors of the Association, Dr. L. M. Anderson of Lake City had introduced a resolution which was adopted, asking that a committee be appointed to investigate the overlapping of the work of various public health agencies carrying on work in our State, and suggesting that all of these organizations be placed under the jurisdiction of the State Board of Health. The chairman of the pre-convention meeting appointed a committee to investigate this condition and their report was presented as follows:

Be it resolved, By this Committee, appointed by the President of the Florida Medical Association at the pre-convention session of the Councilors and Officers of this Association, that:

1. All individuals or organizations coming into this State for the purpose of carrying on any work of a public health nature shall be required to have the approval of the State Health Officer.

2. All county and municipal health departments are requested to demand evidence of such approval before supporting or aiding any propaganda or organizations in their territory.

W. E. VAN LANDINGHAM,
F. CLIFTON MOOR,
W. M. BEVIS.

Dr. C. D. Christ of Orlando inquired as to the advisability of adopting this resolution and filing it away without any further action. Dr. A. H. Freeman of Ocala then moved the following amendment to the motion: That the resolution as given above be referred to the Committee on Legislation and Public Policy and that the resolution be adopted as so amended. Motion carried, and it was so altered.

On motion of Dr. A. H. Freeman of Ocala that the chair appoint a committee the purpose of which shall be to consider the report as made at this meeting and to consider also Dr. Christ's recommendation that some advertising and publicity work be done by the Association and advise the Association as to the best method of carrying out these recommendations and report to the General Meeting the following day, the chair appointed the following committee for that purpose: Dr. A. H. Freeman, Ocala; Dr. C. D. Christ, Orlando, and Dr. W. M. Rowlett, Tampa.

Dr. L. F. Carlton of Tampa then stated that he had received a letter to the effect that Dr. J. W. Alsobrook of Plant City, a member of the Scientific Program Committee, could not attend the meeting because of a critical illness, and suggested that a telegram be sent Dr. Alsobrook by the secretary, expressing the sincere regret on the part of the Association for Dr. Alsobrook's illness and his inability to be present at the meeting. The chairman then instructed the secretary to prepare and forward such a telegram. The second General Session then adjourned.

MEETING OF THE HOUSE OF DELEGATES

The meeting of the House of Delegates was called to order at 5:30 p. m., April 3rd, by Dr. John A. Simmons, president. Roll call of the delegates elected by the various county societies was then called with instructions that if the delegate was not present, the alternate, if present, should be seated. The roll call of the secretary shows the following delegates, alternates or substitutes present:

DELEGATES

ALACHUA COUNTY MEDICAL SOCIETY
G. C. Tillman

BAY COUNTY MEDICAL SOCIETY
J. M. Whitfield

BREVARD COUNTY MEDICAL SOCIETY
I. K. Hicks

BROWARD COUNTY MEDICAL SOCIETY
E. M. Hendricks

COLUMBIA COUNTY MEDICAL SOCIETY
L. M. Anderson

DADE COUNTY MEDICAL SOCIETY
J. A. Simmons
J. G. DuPuis
R. J. Holmes
M. J. Flipse
W. C. Jones

DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY
M. C. Kayton

DUVAL COUNTY MEDICAL SOCIETY
Louie Limbaugh
H. D. Van Schaick
J. D. Love
R. B. McIver
B. L. Arms
R. H. McGinnis
H. H. Harris

ESCAMBIA COUNTY MEDICAL SOCIETY
M. A. Lischkoff
J. S. Turberville

HILLSBORO COUNTY MEDICAL SOCIETY
N. L. Spengler
L. F. Carlton
D. D. Martin
J. S. Helms

LEE COUNTY MEDICAL SOCIETY
J. M. Anderson

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY
B. M. Rhodes

MANATEE COUNTY MEDICAL SOCIETY
T. M. McDuffie

MARION COUNTY MEDICAL SOCIETY
A. H. Freeman

ORANGE COUNTY MEDICAL SOCIETY
H. S. Geiger
C. D. Christ

PALM BEACH COUNTY MEDICAL SOCIETY
W. J. Buck
C. W. Shackelford

PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY
George Dame

PINELLAS COUNTY MEDICAL SOCIETY
R. H. Knowlton
S. B. Bieker
W. M. Davis
Emil Lustig

POLK COUNTY MEDICAL SOCIETY
R. L. Cline
R. H. Mooty

ST. JOHNS COUNTY MEDICAL SOCIETY
G. W. Potter

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY
L. L. Whiddon

SARASOTA COUNTY MEDICAL SOCIETY
Joseph Halton

SEMINOLE COUNTY MEDICAL SOCIETY
W. T. Langley

TAYLOR COUNTY MEDICAL SOCIETY
J. C. Ellis

VOLUSIA COUNTY MEDICAL SOCIETY
J. R. Wells
C. A. Clemmer

Bradford, Hamilton, Jackson, Lake, Madison, Monroe, Putnam, Sumter, Suwanee, and Walton-Okaloosa County Medical Societies were not represented.

The application for charter of the Putnam County Medical Society was read and, on motion, the charter was granted.

The chairman stated that heretofore, selection of the place of the annual meeting had been made in the General Sessions but the constitution and by-laws provide that it should be done by the House of Delegates. The secretary then read section 2 of article 6 of the constitution which makes this provision. The chairman stated that nominations were in order for the next place of meeting. Dr. M. A. Lischkoff of Pensacola presented letters from the city officials of Pensacola and the various civic organizations, inviting the Florida Medical Association to convene in that city in 1929. On motion duly seconded, Dr. G. W. Potter of St. Augustine presented an invitation from the city of St. Augustine. No further invitations being extended or suggested, the chair ordered balloting for the place of the next state meeting which resulted as follows: St. Augustine 34, Pensacola 14. St. Augustine was declared the next meeting place.

Dr. C. D. Christ of Orlando made a motion that the older members of the Association be given the privilege of becoming honorary members without the payment of the usual annual dues of \$10.00 and that the local county society pay for the Journal, if desired. The secretary then stated that the motion might be introduced but could not be acted upon without laying on the table until the following day, citing Chapter 13 of the By-Laws.

Dr. D. D. Martin of Tampa made a motion that a Pediatric Section be created. The motion was duly seconded but was defeated by standing vote.

A motion was then made by Dr. J. S. Helms of Tampa that a committee of three be appointed to consider the advisability of establishing honorary memberships with exemption from dues for those members who have reached advanced years and have been active in the Association work. The motion being carried, the chair then appointed the following committee: John S. Helms, Tampa, chairman; C. D. Christ, Orlando, and D. D. Martin, Tampa. This committee was requested to prepare such a resolution if they deemed it desirable to provide for honorary membership and present it to the next meeting of the House of Delegates in order that it might be made constitutional.

A resolution was then introduced by Dr. R. J. Holmes of Miami, asking that the Association lend its efforts in securing the next annual meeting of the Southern Medical Association for Miami. The motion was duly seconded and carried.

The House of Delegates then adjourned.

SCIENTIFIC SESSION—SECTION ON MEDICINE

The second meeting of the Section on Medicine convened at 9 a. m., April 4th. The following papers were read and discussed:

- "Artificial Infant Feeding Under One Year of Age," Leldon W. Martin, Punta Gorda.
- "Impotency in Young Men, Its Treatment," John E. Hall, West Palm Beach.
- "The Normal Relation of Psychiatry to the General Practice of Medicine and Surgery," G. H. Benton, Coral Gables.
- "Some Psychoses in Which There May be Recovery," W. M. Bevis, Lakeland.
- "Heart Block," E. W. Bitzer, Tampa.
- "Use and Abuse of Blood Transfusions," W. W. Kirk, Jacksonville.

SCIENTIFIC SESSION—SECTION ON SURGERY

The second meeting of the Section on Surgery convened at 9 a. m., April 4th. The following papers were read and discussed:

- "Appendicitis," Alfred Moore, Kendall.
- "The Combined Medical and Surgical Treatment in Intestinal Obstruction and Septic Invasion of the Peritoneum," Kenneth Phillips, Miami.
- "Acute Intestinal Obstruction," Herman Watson, Lakeland.
- "Treatment of Intestinal Obstruction, with Report of Cases," David R. Kennedy, Sarasota.
- "Transplantation of the Ureters," Robert B. McIver, Jacksonville.
- "Roentgen Diagnosis of Injuries to the Vertebrae with Special Reference to the Lumbar Area," L. W. Cunningham, Jacksonville.
- "Cesarean Section—The Type of Operation Indicated," John R. Boling, Bradenton.
- "Paralytic Deformities of the Foot and Their Correction," F. L. Fort, Jacksonville.

THIRD GENERAL SESSION

The General Session of the Florida Medical Association again convened at 12 o'clock noon Wednesday, April 4th. The meeting was called to order by Dr. John A. Simmons, president. The chair declared nominations for president in order.

Dr. W. E. Van Landingham was nominated for president by Dr. Frederick J. Waas of Jacksonville. The nomination was duly seconded. Dr. Frederick J. Waas was nominated for president by Dr. John S. Helms of Tampa. Nomination duly seconded. Vote by ballot resulted as follows: Dr. Waas, 106; Dr. Van Landingham, 52. Chair declared Dr. Waas elected.

Dr. Waas was then escorted to the chair and expressed his appreciation for the honor that had been conferred upon him. He then declared nominations for vice-president in order.

Dr. M. A. Lischkoff of Pensacola was nominated as first vice-president. There being no other nominations, the secretary was instructed, on motion, to cast the ballot for Dr. Lischkoff and the chair declared him as duly elected first vice-president.

Dr. L. F. Carlton of Tampa was nominated second vice-president. There being no other nominations, the secretary was instructed, on motion, to cast the ballot for Dr. Carlton and the chair declared him as duly elected second vice-president.

Nominations for third vice-president were then declared in order. Dr. G. W. Potter of St. Augustine was nominated. There being no other nominations, the secretary was instructed, on motion, to cast the ballot for Dr. Potter and the chair declared him as duly elected third vice-president.

Nominations for secretary, treasurer, and editor of the Journal were declared in order. Dr. Shaler Richardson of Jacksonville was nominated. There being no other nominations, Dr. Richardson was elected by unanimous rising vote.

Dr. G. H. Edwards of Orlando then made a motion that a rising vote of thanks be given Dr. Richardson for his work during the past year

as secretary, treasurer and editor of the Journal. This was duly seconded and carried.

Dr. C. D. Christ of Orlando then read the following report, as a member of the Committee to consider the advisability of the recommendation as to publicity work being carried on by the Association and the method of carrying out such recommendation, this committee having been appointed the previous day in the General Session. The report is as follows:

Your committee, appointed to report on the best method of combating the advertisements of quacks and irregulars, feel that each component medical society should have the authority and privilege to use the newspapers as a medium of information to the public, to give true information on medical subjects and show the falsity of the statements of the irregular advertisers, and further, that the various medical societies be allowed to tax themselves for the payment of such publication. That whatever medical publication shall be given to the lay press shall be first passed upon by the County Medical Society in which this publication is given.

And further, it should be the duty of the County Medical Society to give through the lay press the authentic new medical discoveries instead of allowing that information to come through quack advertisements. That all such publications shall be signed by authority of the regular medical society of the county or counties in which it is given.

A. H. FREEMAN,
C. D. CHRIST,
WM. M. ROWLETT.

On motion, the report was approved by the Association and the Committee continued for the coming year.

The chairman then asked Dr. L. M. Anderson of Lake City to present the past-president's pin to the retiring president, Dr. John A. Simmons. The presentation was made, following which the meeting adjourned, *sine die*.

SCIENTIFIC SESSION—SECTION ON MEDICINE

The third meeting of the Section on Medicine convened at 2 p. m., April 4th. The following papers were read and discussed:

"Hypertrophy of the Thymus Gland with X-ray Pictures, Before and After Treatment," G. S. Osincup, Orlando.

"Nonsurgical Treatment of Infections of the Biliary Tract," George P. Hammer, Tampa.

"Scleroderma," J. M. Anderson, Sears.

"Spider Poisoning Caused by Bites of Genus *Latrodectus Mactans*, or Notorious Black Widow Spider," Henry E. Palmer, Tallahassee.

"Oesophageo-Tracheal Fistula," J. T. Cowart, Tampa.

"Lung Cancer, with Report of Three Cases," J. C. Davis, Jr., Quincy.

"Cicatricial Ectropion Repaired by Using Free Dermic Graft From Temple," J. W. Taylor, Tampa.

SCIENTIFIC SESSION—SECTION ON SURGERY

The third meeting of the Section on Surgery convened at 2 p. m., April 4th. The following papers were read and discussed:

"Cataracts—Twenty-five Years' Observation," Norman M. Heggie, Jacksonville. (Read by title only.)

"Fracture of Base of Skull," J. Raymond Graves, Miami.

"A Study of External Otitis," L. C. Ingram, Orlando.

"Injuries of the External Genitals in the Male, with Report of Cases," R. B. Harkness, Lake City.

"The Sinus Question," R. E. Repass, Ft. Lauderdale.

"Uterine Hemorrhage with No Gross Change in the Uterus," Richard M. Klussman, Ft. Lauderdale.

REGISTRATION

The following registered during the Fifty-Fifth Annual Meeting of the Florida Medical Association, held at Tampa, April 3rd and 4th:

OFFICERS

Simmons, J. A., President.....	Miami
W. E. Van Landingham, V-Pres.....	W. Palm Beach
John E. Hall, V-Pres.....	W. Palm Beach
Richardson, Shaler, Sec'y-Treas.....	Jacksonville
Thompson, Stewart G., Business Manager.....	Jacksonville

Alachua County Medical Society

Dell, J. M.....	Alachua
Gray, C. R.....	Trenton
Goode, J. A.....	Alachua
King, T. Byron.....	Gainesville
Snow, Thomas A.....	Gainesville
Summerlin, J. L.....	Gainesville
Tillman, G. C.....	Gainesville
Weeks, L. R.....	Trenton

Bay County Medical Society

Whitfield, J. M.....	Panama City
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Bradford County Medical Society

Biggs, E. L.....	Starke
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Brevard County Medical Society

Hay, I. M.....	Melbourne
Hicks, I. K.....	Melbourne
White, C. B.....	Cocoa

Broward County Medical Society

Hendricks, E. M.....	Ft. Lauderdale
Klussman, R. M.....	Ft. Lauderdale
Peavy, H. J.....	Ft. Lauderdale
Repass, R. E.....	Ft. Lauderdale
Robinson, L. F.....	Ft. Lauderdale
Walker, H. A.....	Hollywood

Columbia County Medical Society

Anderson, L. M.....	Lake City
Bates, T. H.....	Lake City
Caldwell, Herbert.....	Lake City
Harkness, R. B.....	Lake City

Dade County Medical Society

Aranovitz, S.....	Miami
Babcock, D. T.....	Miami
Baker, L. A.....	Miami
Benton, G. H.....	Miami
Chandler, G. E.....	Miami
Claxton, W. A.....	Miami
Cleghorn, C. D.....	Miami
Du Puis, J. G.....	Miami
Flipse, M. J.....	Miami
Fox, H. H.....	Miami
Ghertler, Max.....	Miami
Gowdy, F. A.....	Miami
Gowdy, R. A.....	Miami
Graves, J. R.....	Miami
Hall, E. J.....	Miami
Harris, R. M.....	Miami
Hodsdon, B. F.....	Miami
Holmes, R. J.....	Miami
Hutton, J. C. F.....	Miami
Johnson, Estella.....	Miami
Jones, W. C.....	Miami
Lyell, R. O.....	Miami
McKibbens, W. M.....	Miami
Manson, P. L.....	Miami
Martin, B. J.....	Miami
Moore, Alfred.....	Miami
Panettiere, Cayetano.....	Miami Beach
Payton, F. J.....	Miami
Pearson, Homer.....	Miami
Pearson, R. J.....	Miami
Phillips, Kenneth.....	Miami
Quillan, W.....	Coral Gables

Raap, Gerard.....	Miami
Roche, C. F.....	Miami Beach
Shaw, E. Clay.....	Miami
Simmons, J. A.....	Miami
Simpson, J. R.....	Miami
Smith, M.....	Miami
Stewart, J. S.....	Miami
Tumlin, C. E.....	Miami
Wood, A. W.....	Miami
Woodard, R. C.....	Miami
Youmans, I. C.....	Miami

DeSoto-Hardee-Highlands County Medical Society

Bevis, H. P.....	Arcadia
Chandler, I. W.....	Avon Park
Crum, M. L.....	Arcadia
Highsmith, G. F.....	Arcadia
Hubert, M. A.....	Avon Park
Kayton, M. C.....	Wauchula
Kirkpatrick, C. H.....	Arcadia
McSwain, D. L.....	Arcadia
Poucher, Allen A.....	Wauchula
Touchton, W. C.....	Avon Park
Weems, H. V.....	Sebring
Witt, C. C.....	Arcadia

Duval County Medical Society

Arms, B. L.....	Jacksonville
Beals, J. A.....	Jacksonville
Black, J. B.....	Jacksonville
Boone, J. L.....	Jacksonville
Boyd, J. E.....	Jacksonville
Brink, F. A.....	Jacksonville
Broadbent, O. P.....	Jacksonville
Chapman, B. A.....	Jacksonville
Collins, C. C.....	Jacksonville
Croft, T. G.....	Jacksonville
Cunningham, Lester W.....	Jacksonville
Dean, Russell.....	Jacksonville
Driskell, S. E.....	Jacksonville
Erwin, Stanley.....	Jacksonville
Fort, F. L.....	Jacksonville
Gammon, Julian E.....	Jacksonville
Goodale, B. H.....	Jacksonville
Harris, H. H.....	Jacksonville
Harris, W. G.....	Jacksonville
Heggie, N. M.....	Jacksonville
Herlong, M. B.....	Jacksonville
Holloway, L. W.....	Jacksonville
Kirby-Smith, J. L.....	Jacksonville
Kirk, W. W.....	Jacksonville
Limbaugh, Louie M.....	Jacksonville
Love, J. D.....	Jacksonville
McGinnis, R. H.....	Jacksonville
McIver, R. B.....	Jacksonville
Manning, W. S.....	Jacksonville
Oetjen, G. F.....	Jacksonville
Richardson, George W.....	Jacksonville
Richardson, Shaler A.....	Jacksonville
Rollins, C. D.....	Jacksonville
Ross, W. E.....	Jacksonville
Sellers, E. T.....	Jacksonville
Swift, Edwin C.....	Jacksonville
Van Schaick, H. D.....	Jacksonville
Waas, F. J.....	Jacksonville

Escambia County Medical Society

Bryan, H. L.....	Pensacola
Lischkoff, M. A.....	Pensacola
Pierpont, J. H.....	Pensacola
Thames, Rufus.....	Milton
Turberville, J. S.....	Century

Hillsboro County Medical Society

Adamson, W. P.....	Tampa
Allen, Bundy.....	Tampa
Andrews, C. A.....	Tampa
Baldwin, R. E.....	Tampa
Bartlett, C. W.....	Tampa
Bidwell, A. M.....	Tampa

Bitzer, E. W.	Tampa
Blake, W. C.	Tampa
Blackman, H. J.	Tampa
Brown, G. W.	Tampa
Butchart, T. R.	Tampa
Byrd, Hiram	Tampa
Carlton, L. F.	Tampa
Carter, E. F.	Tampa
Chandler, J. C.	Tampa
Christian, Geo. R.	Tampa
Cook, Geo. L.	Tampa
Costa, F. J.	Tampa
Cowart, J. T.	Tampa
Crum, J. W.	Tampa
Dickinson, J. C.	Tampa
Duke, R. R.	Tampa
Duncan, W. P.	Tampa
Efrid, Lester J.	Tampa
Ely, R. A.	Tampa
Estes, J. L.	Tampa
Farrior, J. B.	Tampa
Favor, H. M.	Tampa
Forbes, S. B.	Tampa
Gale, John S.	Tampa
Gilbert, Elsie	Tampa
Gilmer, E. S.	Tampa
Glass, R. E.	Tampa
Gyland, Stephen P.	Tampa
Hamner, Geo. P.	Tampa
Helms, J. S.	Tampa
Henderson, R. P.	Tampa
Higgins, Allen F.	Tampa
Hopkins, C. D.	Tampa
Hubbard, R. C.	Tampa
Jefferson, Rollin	Tampa
Jobson, A. M. C.	Tampa
Jones, A. B.	Tampa
Knauf, A. R.	Tampa
Knight, J. C.	Plant City
Lake, E. T.	Sulphur Springs
Lancaster, W. J.	Tampa
Lassman, George	Tampa
Levy, E. C.	Tampa
Lowry, B. W.	Tampa
McCaslan, W. H.	Tampa
McEachern, J. R.	Tampa
McMurray, H. E.	Tampa
McRae, E. H.	Tampa
Maechtle, E. W.	Tampa
Maguire, T. C.	Plant City
Maner, Geo. R.	Tampa
Martin, D. D.	Tampa
Meighen, D. G.	Tampa
Mills, J. H.	Tampa
Oglesby, C. R.	Tampa
Oppenheimer, L. S.	Tampa
Pate, J. C.	Tampa
Patterson, William	Tampa
Rowlett, W. M.	Tampa
Shaver, E. F.	Tampa
Smith, Burdette	Tampa
Smith, H. Mason	Tampa
Smith, W. H. Y.	Tampa
Smoak, Edward	Tampa
Snow, H. O.	Tampa
Spengler, N. L.	Tampa
Stringer, Sheldon	Tampa
Taylor, Joseph W.	Tampa
Thompson, H. O.	Tampa
Thorpe, Franklyn	Tampa
Torbet, R. F.	Tampa
Vaughn, Cecil	Tampa
Weekley, A. S.	Tampa

Jackson County Medical Society

Box, W. C.	Graceville
Harper, C. W.	Chipley
McKinnon, D. A.	Marianna

Lee County Medical Society

Anderson, J. M.	Sears
Brewer, William A.	Everglades
Jones, H. Quillian	Ft. Myers
Longbrake, G. A.	Ft. Myers
Martin, Leldon W.	Punta Gorda

Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society

Brinson, J. B.	Monticello
Davis, J. C., Jr.	Quincy
Folmar, J. Q.	Chattahoochee
Godard, R. F.	Quincy
Moor, F. Clifton	Tallahassee
Palmer, H. E.	Tallahassee
Pound, J. H.	Chattahoochee
Rhodes, B. M.	Tallahassee
Walker, Wm. H.	Lamont
Wilhoit, S. E.	Quincy

Madison County Medical Society

Blalock, A. L.	Madison
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Manatee County Medical Society

Blake, L. W.	Bradenton
Boling, John R.	Bradenton
Davis, J. M.	Bradenton
English, A. Q.	Palmetto
Fleming, C. F.	Bradenton
Gates, Hubbard	Bradenton
Harrison, M. M.	Palmetto
Lancaster, B. M.	Manatee
Larrabee, C. W.	Bradenton
McDuffie, T. M.	Manatee
Mason, J. F.	Bradenton

Marion County Medical Society

Dozier, H. C.	Ocala
Freeman, Albert H.	Ocala
Henry, H. W.	Ocala
Moore, J. N.	Ocala
Stutts, B. S.	Dunnellon
Watt, H. F.	Ocala

Orange County Medical Society

Beardall, H. M.	Orlando
Chappell, J. R.	Orlando
Chiles, J. H.	Orlando
Christ, C. D.	Orlando
Collins, C. J.	Orlando
Dodds, Wm. H.	St. Cloud
Edwards, G. H.	Orlando
Ford, J. A.	Orlando
Geiger, H. S.	Kissimmee
Ingram, L. C.	Orlando
Johnston, Hewitt	Orlando
Marshall, C. J.	Sanford
Orr, Louis McDonald, Jr.	Orlando
Osincup, G. S.	Orlando
Pines, J. A.	Orlando
Redding, J. L.	Orlando
Scott, Sam R.	Ocoee
Sinclair, W. E.	Orlando
Spiers, W. H.	Orlando

Palm Beach County Medical Society

Arnold, W. O.	W. Palm Beach
Baldwin, R. H.	W. Palm Beach
Buck, W. J.	W. Palm Beach
Clay, B. S.	W. Palm Beach
Herman, F. P.	W. Palm Beach
Herpel, F. K.	W. Palm Beach
Pittman, J. H.	W. Palm Beach
Richardson, J. C.	W. Palm Beach
Shackelford, C. W.	W. Palm Beach
Shackelford, W. L.	W. Palm Beach
Whitman, F. S.	W. Palm Beach
Wilson, Martha	W. Palm Beach

*Pasco-Hernando-Citrus County
Medical Society*

Bradshaw, J. T.	Lake Jovita
Creekmore, George R.	Brooksville
Dame, George A.	Inverness
Hancock, W. S., Jr.	Brooksville
Moore, W. B.	Crystal River

Pinellas County Medical Society

Aber, A. H.	St. Petersburg
Anderson, W. D.	St. Petersburg
Bieker, Annette M.	St. Petersburg
Bieker, S. B.	St. Petersburg
Black, M. E.	Clearwater
Brown, H. O.	Clearwater
Coll, Hugh J.	St. Petersburg
Davis, W. M.	St. Petersburg
Dawson, S. A.	St. Petersburg
Dickerson, L. B.	Clearwater
Echard, T. B.	St. Petersburg
Feaster, O. O.	St. Petersburg
Fisk, H. B.	St. Petersburg
Gable, L. M.	St. Petersburg
Gable, N. W.	St. Petersburg
Groves, W. H.	Clearwater
Harden, W. W.	St. Petersburg
Herring, J. A.	St. Petersburg
Kaufman, F. E.	Clearwater
Knowlton, R. H.	St. Petersburg
Lambdin, L.	St. Petersburg
Lustig, Emil	St. Petersburg
McConnell, W. C.	St. Petersburg
MacCordy, Earl C.	St. Petersburg
Marr, N. M.	St. Petersburg
Mighell, N. E.	Clearwater
Miller, G. E.	St. Petersburg
Mills, A. L.	St. Petersburg
Nettles, Robbin	Clearwater
Nickle, M. A.	Clearwater
Post, W. G., Jr.	St. Petersburg
Putnam, H. L.	St. Petersburg
Rieger, O. P.	St. Petersburg
Rudolph, C. C.	St. Petersburg
Ruff, J. F.	Clearwater
Strickland, J. A.	St. Petersburg
Timberlake, Gideon	St. Petersburg
Wade, H. W.	St. Petersburg
Whitford, Grace Ruarc	Ozona
Williams, C. A.	St. Petersburg
Winchester, H. E.	Dunedin
Wood, A. J.	St. Petersburg
Wylie, L. A.	St. Petersburg

Polk County Medical Society

Alexander, O. R.	Winter Haven
Biddle, P. D.	Brewster
Bevis, W. M.	Lakeland
Clark, S. A.	Lakeland
Cline, R. L.	Lakeland
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Martin, E. E.	Haines City
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Watson, Herman	Lakeland
Weed, Walter A.	Lakeland
Wilhoite, R. E.	Lake Wales
Wilson, J. F.	Lakeland

Putnam County Medical Society

Ford, E. W.	Crescent City
Warren, E. W.	Palatka

St. Johns County Medical Society

Parkinson, W. N.	St. Augustine
Potter, G. W.	St. Augustine
Walkup, A. C.	St. Augustine

*St. Lucie-Okeechobee-Indian River-Martin County
Medical Society*

Clark, H. D.	Ft. Pierce
McDermid, H. C.	Okeechobee
Newnham, J. A.	Stuart
Whiddon, L. L.	Ft. Pierce

Sarasota County Medical Society

Cribbins, O. H.	Sarasota
Halton, Jack	Sarasota
Halton, Joseph	Sarasota
Harris, J. E.	Sarasota
Kennedy, David R.	Sarasota
Metzger, Frank C.	Sarasota
Morton, A. O.	Sarasota
Nash, H. C.	Sarasota
Patterson, J. C.	Sarasota
Slocumb, C. B.	Sarasota
Taylor, T. W.	Sarasota
Wilson, C. B.	Sarasota

Seminole County Medical Society

Denton, J. F.	Sanford
Langley, W. T.	Sanford
Mitchell, C. M.	Sanford
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Suwannee County Medical Society

Cline, D. E.	Wellborn
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OUR PRESIDENT

Frederick James Waas was born in Fernandina, Florida, June 27, 1881. He was educated in the public and high schools of his home city and received his M.D. degree from the University of Maryland in 1905. He then returned to his home city where he practiced his profession for four years. In 1909, he moved to Jacksonville. In March, 1908, Dr. Waas was united in marriage to Miss Edith Bond of DeLand. There are, in the Waas home, three daughters, Misses Catherine, Frances and Amo. In 1918, Dr. Waas entered the service of the medical department of the United States army, being commissioned as a captain. He was stationed at the base hospital, Camp Wheeler, Georgia, where he served until after the signing of the armistice. He is chief of the surgical department of St. Luke's Hospital, associate head of the surgical department and secretary of the staff at St. Vincent's Hospital, and associate in gynecology at the Duval County Hospital of Jacksonville. For

several years, he served as local surgeon of the Seaboard Airline Railway. He resigned this position in 1926. He has always been active in the work of the Florida Medical Association, having served as first vice president in 1926. In 1925, he was chairman of the scientific program committee. He is a member of the American Medical Association, the Southern Medical Association, and the Duval County Medical Society, having served as president of the latter organization in 1918. Dr. Waas is a Fellow of the American College of Surgeons. As a Kiwanian, he has served on numerous committees of that organization. He has devoted much time to post-graduate work, having spent several months during the summer of 1924 visiting the clinics of Europe. Dr. Waas has always evidenced a keen interest in civic affairs and is one of Jacksonville's most public spirited citizens. During the coming year, under his guidance, the Florida Medical Association is assured a regime of constructive development for he is one who is ever vigilant in the carrying out of the principles that advance organized medicine.

FIFTY-FIFTH ANNUAL MEETING

At the fifty-fifth annual meeting of the Florida Medical Association, there were 402 members present. This is the largest attendance ever recorded in the history of our Association and denotes the interest being manifested in the work of organized medicine in this state. Our hosts, the members of the Hillsboro County Medical Society, worked untiringly in the preparation of the entertainment features which far surpassed those of any previous meeting. The Scientific Program Committee, consisting of Doctors L. F. Carlton, Tampa; E. D. French, Miami, and J. W. Alsobrook, Plant City, worked diligently in the preparation of the program and their good work produced what was undoubtedly the best program ever presented. For the first time in the history of the Association, the scientific program was divided into two sections, *i. e.*, section on medicine and section on surgery. This method of conducting the program seemed to meet with general approval as it made possible the presentation of twice as many scientific papers as have heretofore

been presented. However, it seems to be the general consensus of opinion that a further sectioning of our scientific program is not the desire of the majority of the members of the Association. Undoubtedly, the incoming scientific program committee will see the advisability of continuing the precedent established by this year's committee, that of dividing the program into a medical and a surgical section. The scientific exhibits were well arranged and the members evidenced a keen interest in them. The annual banquet was attended by well over five hundred guests and provided a fitting finale to the entertainment program. Surely those members who attended the Tampa meeting will not be able to forego the pleasure of attending future meetings of the Association.

CHOICE OF ANESTHESIA

Among the many considerations that confront the physician in a contemplated examination, operation or other procedure accompanied by pain, the choice of anesthesia is not the least important. To the patient this is often a matter of first importance and care regarding this feature not only facilitates the work at hand but contributes greatly to mental as well as the physical comfort of the patient.

The qualifications of the modern surgeon must include a working knowledge of local and regional anesthesia as well as of general anesthetics, their particular indications and their actual administration. The profession no longer thinks of surgery in terms of general anesthesia alone, and the public is demanding work without pain and without "going to sleep."

That all minor and practically all major operations can be successfully and painlessly performed under some form or combination of local anesthetic has been demonstrated repeatedly in all sections of the professional world by surgeons of average as well as of exceptional skill. That the mortality and morbidity rate in poor risks has been lowered by local anesthesia is a matter of record. It is further our opinion that the operator who chooses local anesthesia often develops a more refined technique, handles tissues more delicately, and becomes a better surgeon.

AN OBSCURE HERO

The American Association for Medical Progress has located another survivor of the famous yellow fever experiments conducted by Major Walter Reed and his associates in the United States Army in Cuba in 1901. He is James Hildebrand of Atlanta, Georgia, who was a private in the Hospital Corps in the Spanish-American War, and now, 73 years old, is according to his own statement incapacitated with tuberculosis. Hildebrand's needs are urgent, according to his letter:

"I was born November 9, 1854," he states. "If I live I will soon be 74 years old. I am suffering from tuberculosis and I am unable to work. I went before a medical board at Gainesville, Georgia, and they gave me a total disability as a Spanish War Veteran. I am drawing a pension of \$50.00 per month. It takes part of it to pay my medicine bill to keep me alive. I live with an old sister of mine, a widow older than I am, on 412 Berean Avenue. She has no income and shares what I have."

War Department records show that Hildebrand was one of the men who voluntarily submitted to what was then considered certain exposure to death from yellow fever, by sleeping in the beds vacated by men who had just died of the disease, by wearing the clothes of yellow fever victims, and by submitting to every possible contact with fever-contaminated objects, in a conscious effort to be infected. This was one of the steps in the proof that yellow fever could be transmitted through the bite of a mosquito and in no other way. It was only an unproved theory then, however, so that Hildebrand and his companions were deliberately risking their lives in the experiment.

The story of the yellow fever experiments which permanently eradicated this disease at a cost of death, disability and suffering by many of the volunteer experimenters who thereby made possible the construction of the Panama Canal, is one of the great traditions of American Public Service. The subsequent fortunes and misfortunes of many of the participants have been followed by interested societies, and various movements for relief in their aid have been started when necessary. Others, however, were lost sight of. Recently the Copeland-Wainwright bill was introduced into Congress

to provide for these survivors or their dependents, regardless of military rank or civilian status, and also to empower the Smithsonian Institution to make recommendations in behalf of future participants in such experiments. In connection with the bill the American Association for Medical Progress undertook to locate the "fever squad volunteers" who disappeared from public view after performing their heroic work. Besides Hildebrand these include: Pvt. William H. Dean, Troop E, 7th Cavalry; Pvt. William Olson, Hospital Corps; Pvt. Charles E. Sonntag, Hospital Corps; Pvt. Edward Weatherwalks, Hospital Corps; Pvt. Albert W. Covington, 23rd Battalion, C. A. C.; Pvt. John A. Andrus, Hospital Corps.

Benjamin C. Gruenberg, chairman of a special committee of the New York Association of Biology Teachers to further the Copeland-Wainwright bill has forwarded to all members of the House and Senate a special plea for the bill in behalf of the Association. His letter reads as follows:

"Within the past year thousands upon thousands of our fellow citizens have experienced a certain conflict of emotion in connection with the wide publicity given to our country's share in the elimination of yellow fever in 1900.

"The publication of DeKruif's book, 'Microbe Hunters' and of Mark Sullivan's 'Our Times', as well as of numerous magazine articles on Walter Reed's Commission, on General Gorgas' work in the Panama Canal Zone, and on John R. Kissinger's twenty years of suffering and neglect, have made us feel proud of the human achievement, and at the same time ashamed of our public ingratitude to those who made the brilliant achievement possible.

"There is now before Congress the Copeland-Wainwright Bill designed, first to acknowledge to those who took part in the Reed Yellow Fever experiment or to their survivors the nation's sense of gratitude; and second to establish a continuing instrument for expressing in the future the nation's obligation to those who serve the public in similar ways.

"I am writing on behalf of a special committee of the New York Association of Biology Teachers to urge your serious consideration of the merits of this legislation from the point of view of our national self-respect and to solicit your cooperation in promoting it."

TWENTY MILLION CATTLE UNDER SUPERVISION IN TUBERCULOSIS ERADICATION

A tabulated summary just issued by the bureau of Animal Industry, United States Department of Agriculture, shows the progress to March 1, 1928, of tuberculosis-eradication work in cooperation with the various States. A total of 20,098,212 cattle in more than two million herds are now under supervision for the eradication of this disease. Nearly three-fourths the number of cattle are contained in herds which have successfully passed one or more tuberculin tests.

Herds accredited as free from tuberculosis, as the result of a series of tests, at the end of February, numbered 155,466, containing more than two million cattle. Counties which contain not more than one-half of one per cent of tuberculous cattle as a result of systematic testing number 464. In all these counties the few cattle which reacted to the latest test were removed from the herds and slaughtered. During February, 1928, 741,766 cattle were tested and nearly 18,000 reacted and were condemned as tuberculous.

As the result of systematic testing, bovine tuberculosis in the United States is gradually being reduced.

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Secretary—R. J. Greene Perry

VOLUSIA COUNTY MEDICAL SOCIETY—

President—L. W. Glatzau DeLand
Secretary—R. L. Miller Daytona Beach

WALTON-OKALOOSA COUNTY MEDICAL SOCIETY—

President—E. P. Webb Crestview
Secretary—A. G. Williams Lakewood

(State News Items, page 532)

End Results in Infant Feeding

Nutritional disturbances such as Marasmus, Decomposition, Atrophy, Intoxication, etc., are usually *the end results* of mild beginning fermentative diarrhoeas. Fermentative diarrhoeas are in turn the end results of improper carbohydrate in the infant's intestines.

Carbohydrate, a portion of which is not absorbed rapidly enough, is attacked by the acid-forming bacteria which results in a diarrhoea.

This form of nutritional disturbance is often corrected in its early stages by the administration of Mead's Casec (calcium caseinate) the principal protein of cow's milk. This is in accordance with the Finkelstein theory that protein inhibits the growth of the acid-forming organisms.

But as a measure of safety in infant feeding, the use of Mead's Dextri-Maltose in cow's milk and water formulas will do much toward preventing the occurrence of a fermentative diarrhoea. This is because of its greater assimilation limits (7.7 as against 3.1 and 3.6 for lactose and cane sugar respectively).

A carbohydrate so easily assimilated is, when used with cow's milk and water formulas, the greatest assurance against nutritional disturbances caused by sugar intolerances. For this reason it is used with good results in feeding the majority of well infants, and for the same reason it is invariably the clinical indication in cases of infants with weakened powers of digestion,—those manifesting *the end results* of unsuitable carbohydrate additions to their diets.



Samples and Literature
on request

MEAD JOHNSON & COMPANY

EVANSVILLE, INDIANA, U. S. A.

Makers of INFANT DIET MATERIALS EXCLUSIVELY

STATE NEWS ITEMS

The Lauderdale Memorial Hospital, Ft. Lauderdale, at its annual meeting elected the following officers: President, C. J. Wiig; Vice-President, D. E. Carter; Secretary, J. H. Peavy. Board of Directors: C. J. Wiig, Leigh F. Robinson, R. H. Maxwell, H. A. Walker and S. P. Brush.

* * *

Born to Dr. and Mrs. Ralph E. Stevens of Sanford, a baby girl.

* * *

Dr. and Mrs. W. H. McCaslan of Tampa announce the birth of a daughter, Lucy Hill, on February 9, 1928.

* * *

The many friends of Dr. Ralph Smith of Jacksonville will regret to learn of the death of his daughter, Virginia, who died from septicæmia in New York City during the past month.

* * *

Dr. S. H. Townsend, formerly of St. Petersburg, has moved to Oklahoma where he has accepted a hospital position.

* * *

Dr. J. W. Alsobrook of Plant City is seriously ill with typhoid fever. Dr. Alsobrook was a member of the Scientific Program Committee, but owing to his illness, was unable to attend our past annual meeting.

* * *

Dr. H. H. Cooke, formerly of St. Petersburg but now a Fellow of the Mayo Clinic, Rochester, has transferred his membership from the Pinellas County Medical Society to the Olmsted County Medical Society of Minnesota.

* * *

Dr. W. M. Bevis of Lakeland read a paper on "Mental Diseases" before the DeSoto-Hardee-Highlands County Medical Society in Sebring, March 13th.

* * *

Eye, ear, nose and throat doctors of the world will meet for the first time at the First International Congress of the Oto-Rhino-Laryngological Society, to be held in Copenhagen, Denmark, July 29th to August 1st. That was the announcement made recently by the American Committee of the Society, 25 Broadway, New York. More than seventy-five specialists will represent the United States at the Congress. These doc-

(Continued on page 534)

As a General Antiseptic

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TINCTURE OF IODINE

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MERCUROCHROME—220 SOLUBLE

(Dibrom-Oxymercuri-Fluorescein)
2% SOLUTION

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Hynson, Westcott & Dunning
BALTIMORE, MD.

The only way you can visit Rochester, Minn. en route to or from the A. M. A. Convention without extra cost.

Travel
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to the meeting of the
American Medical Association
Minneapolis, Minn.
JUNE 11 to 15, 1928

Let us make reservation for you now on **The Legionnaire**—our crack train to Rochester, St. Paul—Minneapolis leaving Chicago 6:30 p.m. every evening and arriving in Rochester and the Twin Cities next morning.

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tors will also spend some time visiting at various large cities in France, England, Germany, Norway and Sweden. Clinical discussions will be held in these countries with European doctors presiding. The Congress will concern itself with questions relating to the treatment of the many maladies, injuries and infections of the eye, ear, nose and throat. It has been reported from abroad that very successful methods have been found for sinus trouble and middle ear deafness.

* * *

Dr. A. P. Roope of St. Petersburg is convalescing from an infection and subsequent amputation of his right forearm.

* * *

The Brevard County Medical Society held its annual dinner Friday evening, March 16th. The following officers were elected for the year: I. F. Bean, Melbourne, president; L. E. Harde- man, Titusville, vice-president; I. K. Hicks, Melbourne, secretary-treasurer.

* * *

Dr. J. L. Johnson of Orlando was recently appointed city physician to fill the unexpired term made vacant by the death of Dr. W. W. Farnell.

* * *

Dr. S. Lambrecht of Greenville, Florida, died very suddenly at Valdosta, Georgia, April 5th.

* * *

The Marine Hospital of Key West is being thoroughly renovated and modernized. Dr. M. S. Lombard is the surgeon in charge.

* * *

At the meeting of the Pinellas County Medical Society held March 23rd at St. Petersburg, the following program was rendered:

"Hip Fractures," Dr. S. H. Townsend.

"Pellagra," Dr. W. W. Harden.

* * *

The following resolution was unanimously passed at the February 9th meeting of the Putnam County Medical Society:

"Be it resolved, that in applying for a charter for the Putnam County Medical Society, we do hereby adopt as our standard the code of ethics of the American Medical Association and promise a faithful observance of the same, together with all other parts of their constitution and by-laws."

(Continued on page 536)

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

The Bartow Municipal Hospital was recently opened.

* * *

The Radiological Society of North America will hold its 14th Annual Convention in Chicago December 3rd to 7th, inclusive, 1928. The Drake Hotel, Lake Shore Drive and North Michigan Avenue, has been selected as the headquarters. We are assured of ample accommodations and exceptionally reasonable rates and of the best and most efficient service.

Make your plans for this year include Chicago's greatest Radiological Convention. Every physician who is interested in this branch of diagnosis and therapy is welcome.

There are no registration fees, no additional expense. Plans are under way now to secure reduced transportation rates.

The ladies' local reception committee is making plans for the entertainment of all visiting ladies. These plans include theater parties, luncheons, shopping tours and sight-seeing trips, with generous hospitality extended to all visitors.

Much attention is being given to arranging for scientific and commercial exhibits. These exhibits will afford a postgraduate course of instruction in nearly every branch of medical science. Clinics covering radiological problems as well as other branches of medicine will be given every day during the session. We are assured by the program committee of an instructive and interesting scientific session and a program upon which will appear representative men from all sections of this country and Europe.

Start to make your plans to attend now. Many papers on general diagnosis and therapy will be read and discussed during the scientific session.

The location of our headquarters at the Drake Hotel will be found especially convenient. Therefore, make your plans to attend this meeting now. You cannot afford to miss this 14th Annual Session of the Radiological Society at Chicago. Reservations should be made early. Communicate with Chairman of Hotels and Lodgings Committee, T. J. Ronayne, M.D., West Suburban Hospital, Chicago, Illinois, or direct with Drake Hotel, Chicago, Ill.

(Continued on page 538)

NOW INCREASED CLARITY IS AT THE COMMAND OF THE OCULIST

THE oculists' lens prescription, based on careful diagnosis, is theoretically correct. But what about lens accuracy? ----- For years, oculists have realized that rays of light passing through the margins of ordinary ophthalmic lenses frequently do not focus on the retina—without extra accommodation by the eye itself.

It is evident to them that clarity of vision falls off, and slight eye strain is introduced.

Tillyer lenses focus the visual image precisely on the retina, no matter what portion of the lens the eye looks through.

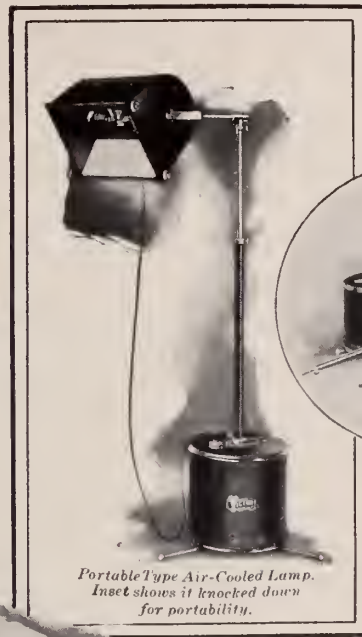
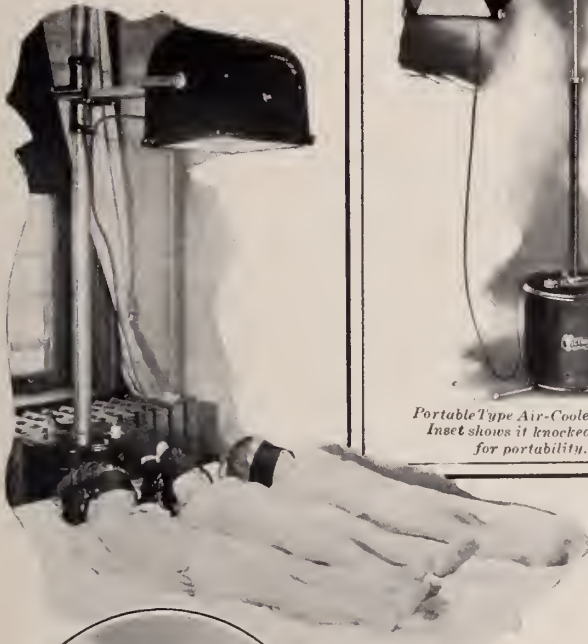
Because of a higher polish, Tillyer lenses give a cleaner, brighter definition through the center and, because of greater accuracy, hold this definition over the entire surface of the lens.

Oculists who prescribe Tillyer lenses are impressed by the patient's immediate acceptance of the correction. They have removed the fatigue of oblique vision present with ordinary lenses, most annoying to new wearers of glasses.

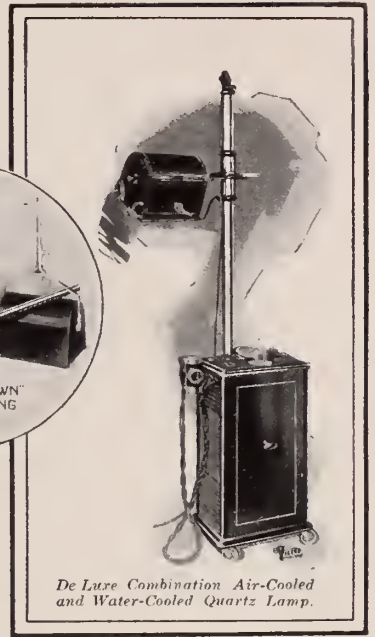
Bifocal wearers make constant use of the margins of their lenses. Tillyer bifocals will greatly benefit them.

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Whether the space available is small or large, or the current direct or alternating, there is available in the Victor line of quartz lamps a model that will permit the treatment of cases with the utmost facility and economy.



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PLEASE MENTION THE JOURNAL WHEN WRITING TO ADVERTISERS

The Suwannee River Medical Society met in Jasper, Friday, March 9th. Dr. H. M. Strickland read an interesting paper on some phases of physiotherapy in treating diseased conditions.

The meeting was very interesting and well attended, the following doctors being present:

Jas. J. Beaty, Jennings, Fla.
 Geo. O. Davis, Madison, Fla.
 Eustace Long, Madison, Fla.
 A. L. Blalock, Madison, Fla.
 O. F. Green, Mayo, Fla.
 T. S. Anderson, Live Oak, Fla.
 H. M. Strickland, Live Oak, Fla.
 J. R. Bruce, Jasper, Fla.
 W. M. O'Cain, Jasper, Fla.
 J. H. Corbett, Jasper, Fla.
 Herbert Caldwell, Lake City, Fla.
 P. C. Farnell, Lake City, Fla.
 John D. Gable, Lake City, Fla.
 P. A. Tatum, Lake City, Fla.
 L. J. Arnold, Lake City, Fla.
 J. H. Dyer, Lake City, Fla.
 R. B. Harkness, Lake City, Fla.
 T. H. Bates, Lake City, Fla.

* * *

A few days after the official opening day, on March 16, 1928, when the new Presbyterian Hospital building at Medical Center in New York, was opened for inspection by the medical authorities, the Presbyterian Hospital of New York admitted patients to wards and private rooms, and out-patients to the Vanderbilt Clinic. This building, the tallest hospital structure in the world, in which are housed the Presbyterian Hospital, the Sloane Hospital for Women and Squier Urological Clinic, has an ultimate bed capacity of 1,177.

A few days before this date Anna C. Maxwell Hall, the residence of the Presbyterian Hospital Training School pupils, was first occupied by the incoming class of about 50 students. This is a fifteen story H-shaped structure, having living quarters for 360 pupil nurses, in individual room with running water for each pupil nurse; a large swimming pool and recreation hall are features of the residence.

(Continued on page 540)

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Children really enjoy Patch's Flavored Cod Liver Oil because it tastes good. If you can give a small dose of a highly potent and pleasantly flavored cod liver oil the problem of administration is solved.

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The Florida State Hospital for the mentally deranged, located at Chattahoochee, recently observed its fifty-second anniversary. From a small institution, it has grown to that of an establishment with a staff of over one thousand physicians and attendees. There are eight physicians, one laboratory technician, one druggist, two dentists, two dental assistants, one dental laboratory technician, nine graduate nurses, thirty pupil nurses, ten bookkeepers and stenographers, one embalmer, fourteen supervisors, two hundred fifty-five attendants and three hundred sixty-four who look after miscellaneous matters. The inventoried valuation of the institution was estimated at \$1,959,696.16. The institution now has 116 buildings and owns 6,830 acres of land. It owns and operates the following buildings and equipment: An infirmary of 250-bed capacity, modernly equipped with an X-ray laboratory; a pathological laboratory, an accredited training school for nurses, a dental infirmary, modernly equipped; a tubercular infirmary for the tubercular insane, a drug store, an occupational therapy department whereby every form of employment is available; a casket factory, an embalming and funeral parlor, a variety shop, a power plant, an ice plant, a cold storage plant, a waterworks plant, a fire department, a telephone system, a planing mill, a cement block factory, a feed and grist mill, a laundry, a dry cleaning and pressing shop, a barber shop, a farm and dairy, a cane mill and a chicken ranch. The institution admits those only who are legally committed by the courts as insane. The figures announced by the hospital and approved by the board show that in 1909 there were 335 admitted and in 1927 the total had grown to 1,135, showing, board members explained, just why it was necessary to gradually expand the hospital's equipment and staff to cope with its great increase in population. In 1909, a total of 230 patients were released, and in 1927 the number was 578. On January 1, 1928, the institution recorded a total of 2,799 patients. Dr. J. Q. Folmar is the present superintendent of the hospital.

WANTED—We have several well-trained practical laboratory technicians with additional training in physiotherapy graduating from our school of public health May 15; physicians, hospitals, clinics, and health departments desiring such service can secure it by writing immediately. Address, Dr. L. H. South, Director Bureau Bacteriology, Kentucky State Board of Health, 532 West Main Street, Louisville, Ky.

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Horlick's Milk Modifier



augments the nutritive value of cow's milk by the addition of these valuable elements derived from choice barley and wheat:

1. **Carbohydrates**—maltose 63%, dextrin 19%.
2. **Cereal protein**, an effective colloid for casein modification.
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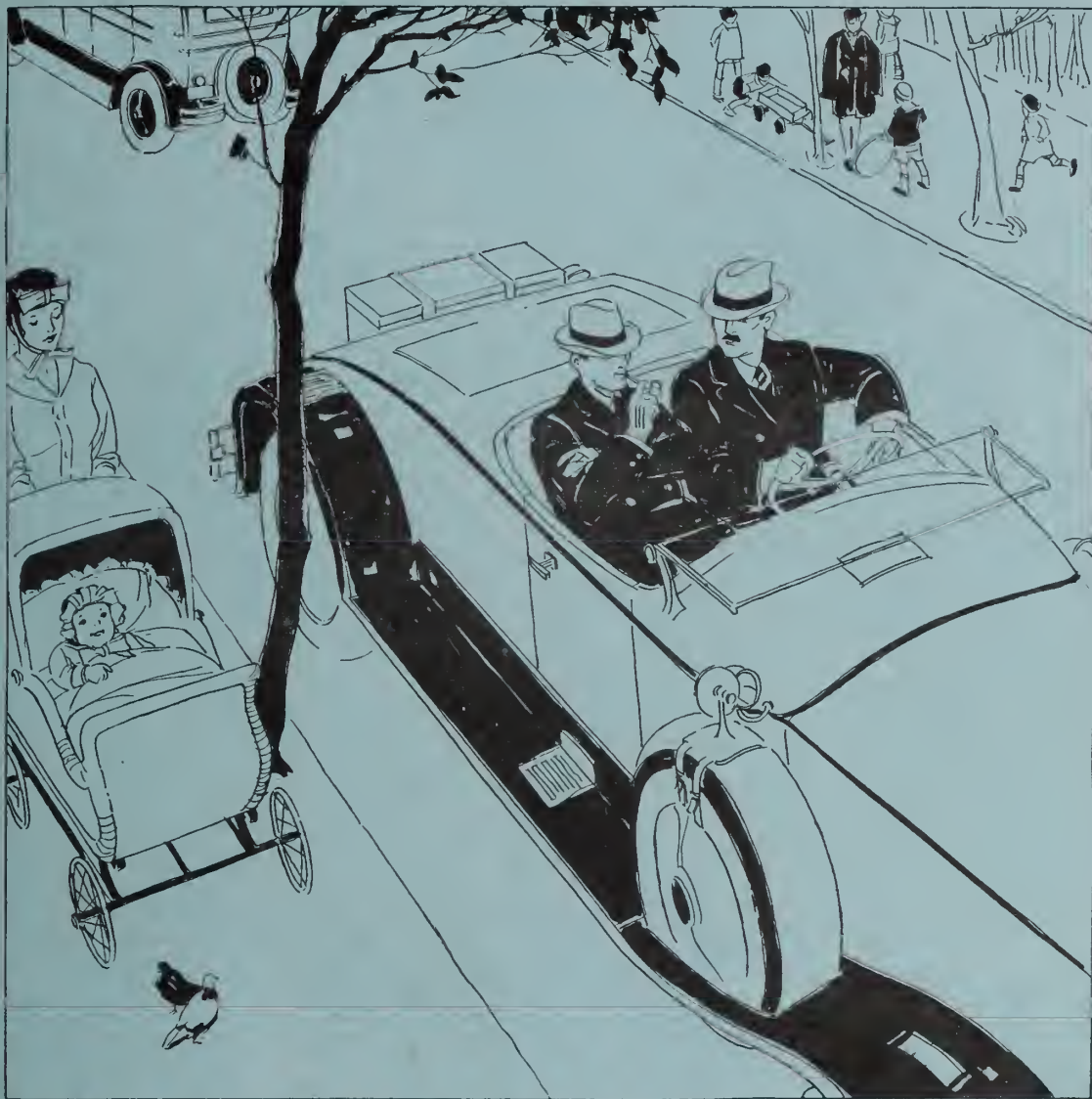
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may be
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with
Pollen Antigens *Lederle*

FIRST, the exact date of onset and duration of the patient's hay-fever symptoms should be determined.

SECOND, only wind-borne pollens in the atmosphere when the patient suffers can cause an attack.

THIRD, pollens which cause the patient's hay-fever will, when used for the skin test, produce, (usually within ten to twenty minutes) a white, raised area of skin which looks like a "hive" and which is termed an "urticarial wheal."

FOURTH, treatment should be given with the individual Antigen prepared from that pollen which gives the largest-sized reaction in the diagnostic skin tests; provided the history of the case shows that the patient's hay-fever symptoms occur during the season of bloom of that particular plant.

Literature upon request.

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NEW YORK

THE JOURNAL

— OF THE —

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It is uniform as to composition---low in bacteria count---safe and practical.

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The alkali depletion associated with pneumonia and influenza suggests the use of Kalak Water because in this way it becomes possible to supply those elements needed for maintaining a normal alkali reserve.

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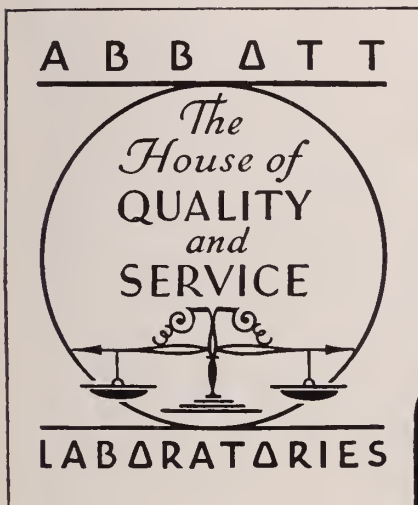
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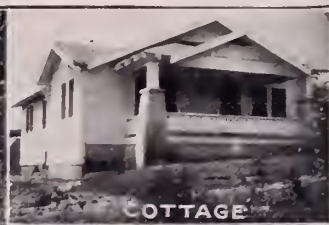
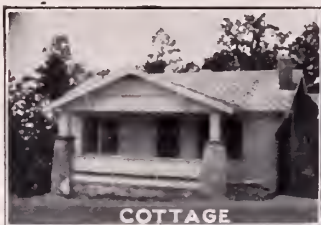
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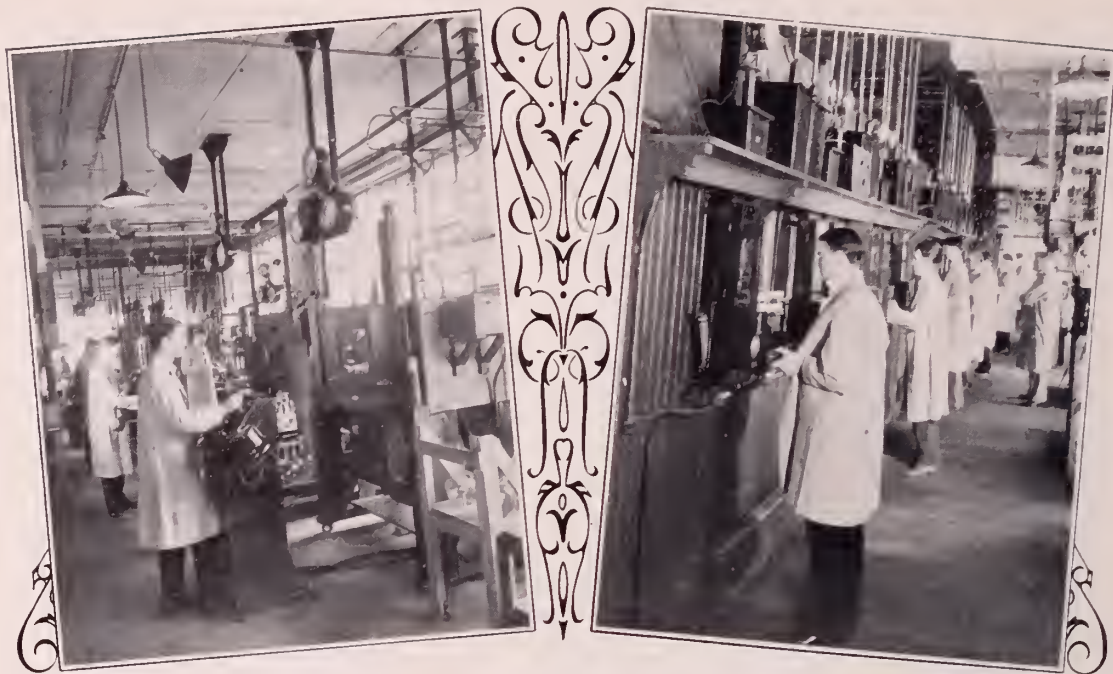
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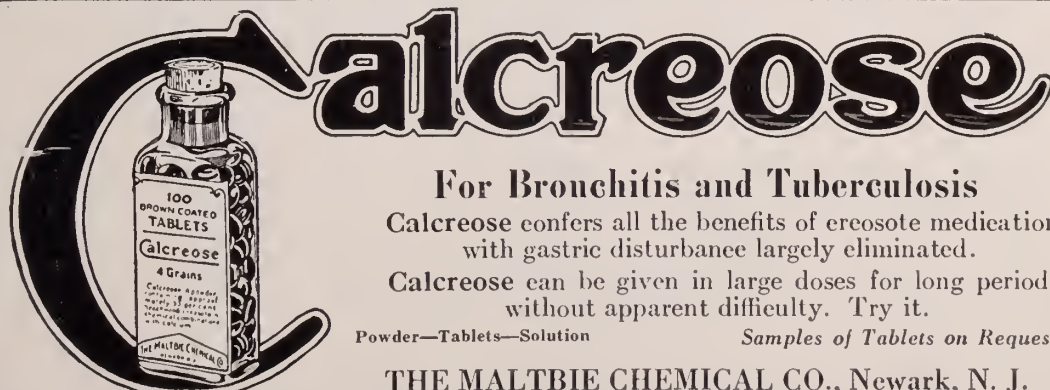
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Number 11

TREATMENT OF TUBERCULOSIS*

W. A. CLAXTON, M.D.,

Miami.

Tuberculosis is one of the few diseases which we expect to cure by what seem comparatively slight or unimportant remedial measures. In this disease we prescribe, not medicines, but a mode of life. We have no specific drugs or sera for the cure of tuberculosis, so must depend on building up constitutional resistance.

The tubercle is the lesion of tuberculosis, and a brief consideration of its pathology will help us to understand the significance of our principal remedy, which is rest. In the tubercle, we have a caseous centre surrounded by endothelial cells, and again surrounded by layers of fibrous tissue. Poisonous products which result from disintegration of this caseous centre are carried out by the lymph stream and give us our symptoms or reactions. Healing takes place by the formation of sufficient fibrous tissue to wall off completely this caseous centre and keep the poisonous products from getting out. In active or progressive tuberculosis, the lesion is becoming caseous in the centre faster than the fibrous tissue can build a wall around it. Now let us consider what will best promote the formation of this fibrous tissue and what will retard it. It has been found that the cells surrounding a tubercle become sensitized to toxins of the bacillus so that very minute doses have the effect of causing inflammation and giving us a focal reaction. Movement of the body causes a change in osmotic pressure, which lets out these poisonous products, hence we must have rest. Along with this rest must be good food, fresh air, a contented mind, and a determination to get well.

The cure of tuberculosis may be divided under three heads:

1. Relief of symptoms and complications.
2. Constitutional treatment or building up of the patient.
3. The cure of the local lesion.

It is for the first of these, the relief of symptoms, that the average patient comes to the physician and demands relief. He wants relief from his cough, his loss of weight, loss of appetite,

and other intestinal disturbances; from his night sweats, and feeling of tiredness. The physician who attempts to relieve these conditions by cough medicines and tonics, is treating symptoms and complications and not the disease.

If at this time the patient can be made to understand that the symptoms he complains of can be relieved by rest, good food, etc., and can be induced to undertake treatment, he is at the beginning of his second stage of the cure, namely, constitutional treatment, and this, if carried out sufficiently, will result in the healing of the local lesion, which is, of course, our goal.

Any tuberculosis patient will do better and get well faster if he can live at a sanatorium for at least three months. The average patient does not know how to rest. When he goes to a sanatorium, he is surprised to see that what he considers resting is looked upon by his fellow patients as taking considerable exercise. It may be said that every patient who comes to a physician's office and is diagnosed tuberculosis, needs bed care. In an early case, this may be for a month or two only. The patient should have explained to him as much of the pathology of his condition as his mind can assimilate. It is always a mistake to hide from the patient the true condition of his lungs, as this will inevitably lengthen his course of treatment, or shorten his life. Also, in many cases, this harms the physician's reputation, for, if the physician does not impress on the patient the full need of long continued rest, he cannot hope to get results from the symptomatic treatment he is forced to prescribe. Eventually, the patient is dissatisfied because he is not getting well and goes to another physician, who diagnoses his condition as tuberculosis. Then this patient blames the first doctor for a mistake in diagnosis.

Fundamentally, the more the patient with active tuberculosis will rest, the more quickly he will have his disease arrested. He will improve faster if he is kept in bed for twenty-four hours a day, using bed pan and urinal; he will improve faster if he does not sit up in bed or read or write letters or play cards or have visitors, or smoke. Smoking may not be definitely harmful to the lungs, but it does destroy the appetite and irritate the throat.

*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

The patient should have a bed on a screened south or east porch; the only protection needed in Florida being against blowing rain. This may be achieved by canvas curtains.

Now, we all know that many patients cannot be made to follow this Spartan routine, but it is the physician's duty to tell the patient of every measure that will speed up his recovery, and let the patient follow as closely as his temperament and environment will allow. It is very important that the physician outline a definite daily program even for a strictly bed patient. There should be a certain hour for meals, for reading, for absolute relaxation and for sleep. This routine should be adhered to strictly and not in a haphazard fashion. The patient will have more confidence in his physician if the physician is definite in his instructions.

Food.—The idea that a patient with tuberculosis should be made to eat all that can be stuffed into him is no longer held. The stomach is the organ of the body on which we depend for assimilating the material which will build the fibrous wall around his lesion. It is supremely important, then, that his digestion be kept as nearly perfect as possible. Rest is a great tonic in tuberculosis, as toxins circulating in the blood destroy the appetite. After a patient has rested for a few days in bed, gets his temperature down to nearly normal, and has meals regularly on the minute his appetite will be such that three good meals a day, with a glass of milk at bedtime, are sufficient to nourish his body and give him plenty of reserve to cause a gain in weight. Do not pamper the appetite too much. The food should be well cooked and wholesome and should be served as attractively as possible. It is pre-eminently important to keep the stomach working well. This sometimes forbids the use of such medicines as creosote and codliver oil. Preparations of these substances may be given with good effect in many cases, but they should not be used at the expense of deranging the digestion.

Digestive Disturbances.—In many cases these are due to an excess of toxins circulating in the body. In other cases, however, and more often than we imagine, they are due to intestinal tuberculosis, even in moderately advanced cases. Tuberculosis of the small bowel usually causes anorexia and constipation. Tuberculosis of the large bowel causes diarrhoea. For constipation, the regular use of medicinal laxatives should be discouraged. Shredded agar and mineral oil act mechanically, and are the best remedies for con-

stipation. They may be taken routinely for long periods without damage. Continued frequent use of enemas is not wise. For diarrhoea from intestinal tuberculosis, there is not much in the way of medication. Strong astringent drugs are not to be advised. Calcium carbonate, grs. 30 t.i.d., is sometimes useful. Calcium chloride intravenously has been helpful at times. Ultra violet lamp is probably our best remedy. Purgative with the calcium carbonate should be used for cramping pains.

Medicines.—Routine medication is not necessary. Cough medicines should be used sparingly, if at all, and only when actually needed, as in irritation of the throat. The patient should be encouraged to suppress non-productive cough. He can be trained to allow his secretions to accumulate in the throat when they may be coughed up with minimum effort. An irritable cough may be relieved by lozenges as peppermint or mild aromatic medicated syrups. Sipping hot water will often stop a coughing spell. Iced drinks, ice cream, acids and pickles, on the contrary, are apt to produce attacks of coughing.

Exercise.—When a patient is free from temperatures, gaining weight, and feeling rested, the critical time in his treatment has arrived. He feels that he is well and cannot see any reason for staying in bed. He wants to take a chance. It is at this time that the condition of his tubercle should again be explained to him. At this period, he has a fibrous wall around his tubercle, which is keeping in the toxins. Graduated exercise is equivalent to a dose of tuberculin, and it should be so supervised that he gets just enough to stimulate the formation of more tissue but not enough to poison the cells already formed and cause them to break down. If a patient up to this time has been a twenty-four-hour bed patient, he may be allowed to sit in a chair for say fifteen minutes for a few days. This period may be gradually increased. Later, he may take five minutes additional walking exercise. During this testing out period, the pulse and temperature should be closely watched and the physician should be guided by these in increasing exercise. Exercise may be increased to two, four or six hours a day but should be taken as a prescription, regularly, and with due regard to the patient's physical improvement. Danger signals are increased cough, tiredness, loss of weight, temperature and appearance of not doing well, as well as increase of signs on the chest.

There are some complications which may not be discussed fully in this paper. Hemorrhage should be treated by absolute rest with codine or heroin. Morphine is not recommended. Liquid diet should be given for a week after the hemorrhage ceases and perhaps pneumothorax may be indicated. Calcium chloride intravenously has been of value in stopping hemorrhage.

Hoarseness and loss of voice are signs of beginning throat involvement. Tuberculosis of the throat is best treated by whispering or absolute silence, the patient using pad and pencil to make his wants known.

In tuberculosis of the testicle, the organ should not be removed. Sun or ultra violet lamp should be used. A tuberculous eye should never be removed. It may get well, or at least become quiescent.

Heliotherapy.—Much has been said of the healing quality of the sun's rays. Certainly sun treatment is of benefit, but should not be used indiscriminately. Patients with active pulmonary tuberculosis as a rule should not be given heliotherapy or if it is given, it should be used very cautiously, to be sure that it is not increasing the symptoms. In tuberculosis of the eye, throat, testicle and glands, heliotherapy has been found of much value, but should always be used under the watchful care of a physician familiar with its effects. In other words, heliotherapy is of more value in non-pulmonary than in pulmonary tuberculosis.

Contacts.—No plan of home treatment is complete that does not offer thorough consideration of all the other inmates, both children and adults. Every contact who has lived in the same house with a patient suffering from active tuberculosis should have a thorough physical examination with X-ray when necessary. Every child contact should have repeated examinations and his health should be carefully watched during childhood and up to adult life.

Tuberculosis can be cured if treatment is begun early and continued long enough. The patient must cooperate. The physician should instruct the patient in the facts regarding his disease.

Do not be in a hurry to discharge a patient as needing no further advice. An arrested case of tuberculosis should have medical advice for years. He should be warned to fear a cold and go to bed when he gets one. He should keep his weight a little above normal. He should be

watched so that he will not let his enthusiasm cause a set-back.

We must care for the tuberculosis patient at the right time and in the right way until he is cured, instead of at the wrong time and in the wrong way until he is dead.

DISCUSSION.

Dr. R. H. McGinnis, Jacksonville:

I want to stress what has been said in this paper about home treatment. Most of the cases of tuberculosis are necessarily treated in the home. Regarding what the essayist has said about treatment in the home, it is only necessary to stress the need of good food, of rest and of plenty of fresh air, and I would add one other thing, and that is wholesome surroundings.

The treatment of every tuberculous patient should be outlined in detail, the individual characteristics considered and evaluated. His surroundings should be made attractive, restful, cheerful, with attendants who offer encouragement, sympathy, love. Nowhere does one obtain love and devotion to a greater degree than in the home. Rest and exercise must be regulated by the physician according to the quantity and quality of the pathology present.

Dr. Marvin Smith, Miami:

I do not treat tuberculosis, except where occasionally a case of gastro-intestinal disease occurs in connection with it. Until a few years ago, tuberculosis caused more deaths than any other known disease, but within the last three years, cardio-renal-vascular disease has stepped up and taken first place.

I appreciate the paper of Dr. Claxton. He touched a question that is, I think, of great importance, and that is the problem of feeding the tuberculous patient. One danger is in giving the patient too much food and another is in not giving sufficient to enable him to overcome the destructive processes that are going on. Then again the selection of the items of food is an essential factor. This brings us at once to the necessity of knowing what the chemistry of the stomach is, in each individual case, before we can intelligently lay out a dietary regime that will fit it and bring about the results that we wish. It is my belief that many failures in treating this disease result from improper management of the diet, overfeeding, etc. I happened to be in a physician's office one day when a patient came in that was being treated for tuberculosis. The physician asked the patient how

he was getting on with those nine eggs a day and the patient replied: "Doctor, I can't eat nine eggs a day." "Yes," the physician said, "but you must eat nine eggs a day, as your recovery depends upon taking good wholesome food." Both the physician and the patient told the truth, but the amount of food was certainly too great.

If we can get the tuberculosis patient before his condition is too far advanced, I do not believe it is unwise to subject him to a gastric test and find out just what his digestive ability is; then we will know how much and what kind of food to recommend and whether the digestive enzymes need to be supplemented.

Dr. W. J. Claxton, Miami (closing):

I was very glad to hear the discussion which has taken place. I think all realize that tuberculosis is an important disease, and a disease that should be considered as such by all. There is nothing further I will add except to stress the point about individual treatment; that is, the individuality of the patient. A lesion that might in three-fourths of the cases find the patient able to be around, might in one-fourth require that he be in bed. This is because of the difference in resistance. As a general rule in lesions of equal extent, the longer the patient has the disease, the better the resistance, and, therefore, the prognosis.

BRILL'S DISEASE—SPORADIC TYPHUS*

A REPORT OF TWO CASES

T. H. BATES, M.D.,

Lake City.

Dr. Nathan E. Brill (1898-1910-1911), of New York, called attention in 1910 to a typhus-like disease occurring endemically in that city. Because of its generally milder course and its occurrence under circumstances different from those seen in typhus, he hesitated to identify it as such. Accordingly he believed that he was dealing with a new clinical entity, "an infectious disease of unknown etiology." Cases of this type have since been known in the United States as "Brill's disease."

In 1912, Anderson and Goldberger, who had previously reported on the experimental transmission of Mexican typhus (tabardillo) to monkeys, were similarly successful in the inoculation of a Rhesus monkey with blood from a case of Brill's disease in New York. They found

that as in tabardillo, one infection rendered monkeys immune to subsequent inoculations of the same passage virus. Monkeys previously infected with Mexican typhus were found to be immune to inoculation with Brill's, while those previously infected with Brill's were immune to Mexican typhus. From these observations, they concluded that Brill's disease was, in fact, identical with typhus fever and this conclusion seems to have been quite promptly accepted by the medical profession in general.

During the year or so following, due to the interest stimulated by these two publications, a number of reports of the occurrence of cases similar to those described by Brill, appeared in American Medical literature. In addition to these, and since that time cases of clinical typhus have continued to be reported to the United States Public Health Service, each year from various parts of the United States, but particularly along the Atlantic seaboard and those states along the Mexican border.

A certain portion of these have been imported or traceable to infection recently imported from foreign sources. Such cases have presented the epidemiological picture usually associated with typhus as known in Europe. For instance, on the fairly numerous occasions when typhus has been introduced from Mexico in the last ten years (Pierce, 1917; Boyd, 1917; Cumming and Senfter, 1917; Armstrong, 1922; Tappan, 1926) the disease has been virulent, the mortality high and the cases have been in persons obviously lousy or those in contact with them.

On the other hand, there have been a large number of sporadic cases of mild typhus, which could not be traced to recent importation and occurring under circumstances which strongly suggested local origin of the infection. In regard to this so-called endemic or sporadic typhus, Brill originally noted that the epidemiology presented points of difference from that generally assigned to typhus. He pointed out that the cases occurred sporadically, without traceable connection with each other, that they seldom, if ever, gave rise to new cases among those in contact with the sick person, that no localized outbreaks occurred, and finally that their seasonal distribution differed from that of typhus.

In 1922, while detailed as acting State epidemiologist to the State Board of Health of Alabama, Dr. K. F. Maxcy had occasion to observe a number of cases which were identified

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clinically as the endemic form of typhus described by Brill and which gave a positive Weil-Felix blood serum reaction. Maxcy and Havens undertook an epidemiological survey with the result that it was discovered that sporadic typhus was present not only in Alabama, but in Georgia, North and South Carolina and Florida in sufficient numbers to make it worth our while to become familiar with the diagnosis and recognition of the diseases. The first report of Brill's disease in this section of the country was that of Paullin in 1913, in which he described the clinical course of six cases seen by him in Atlanta, Ga. In 1914 Newell and Allen reported four cases in Charlotte, N. C. In a later report Allen in 1923 reported in detail twenty-four cases, none of which had contact with any other case in the series. Smith of the Charleston, South Carolina, Board of Health reported some fifteen cases occurring there in 1922-1925, while cases have been reported from a number of towns in Georgia and Alabama. During 1926 there were reported to the Alabama State Board of Health forty-eight cases, while in 1927 there were sixty-nine cases. Seventy-five cases were reported to the Georgia State Board of Health in 1927 in addition to 72 cases that occurred in Savannah where there were six deaths. For some years an occasional case of typhus has been reported in Jacksonville and reports of cases in Tampa, Dunedin, Jensen, St. Petersburg, Callahan, Lakeland, Orlando, West Tampa, Pensacola and Ybor City have been made in the past few years.

My personal interest in the subject of Brill's was aroused when the Bureau of Communicable Diseases of the State Board of Health questioned my diagnosis of a case which I had reported to the Bureau of Vital Statistics. I have since been convinced that my original diagnosis of paratyphoid was in error and in the face of a positive Weil-Felix reaction reported from two widely separated laboratories have had to admit a diagnosis of Brill's disease or sporadic typhus.

Briefly I want to give you the case histories:

CASE 1, C. J. H., young white man, aged thirty, city salesman for wholesale grocer, September 23, 1927, in the forenoon felt chilly and ached, played golf in the afternoon hoping to feel better by getting out in the open and away from work. Next evening still feeling bad, discovered that he had fever. When seen about 8 p. m., face was flushed, eyes injected, tongue dry and coated, temperature 101.6, pulse 100, res-

piration 20, throat slightly red, chest, abdomen and extremities negative; complained of some headache. Patient had taken quinine, so no blood smear was made on first examination. Symptomatic treatment was instituted and a policy of watchful waiting pursued. Two days later, on the fourth day of illness, a few very distinct pink macules the size of a pin-head were noticed over the lower part of the chest and upper portion of the abdomen. Blood smear taken on this date was reported negative for malaria-typhoid, paratyphoid and typhus. Specimens were taken at two-day intervals, all of which were reported negative until the tenth day when a "positive for typhus" report was made. During this time, the patient ran a temperature from 101 to 103 continuously, was quite constipated, very drowsy and developed a moderately thick crop of red macules about the size of a pin-head which were most marked on the lower chest and along the upper part of the abdomen and along the sides of same. A few were seen on the forearm on the flexor surface. Medicine had little or no effect on the temperature. On the fourteenth day the temperature was noticeably lower, and on the fifteenth reached normal and did not become elevated again. During the course of the disease the urine was examined several times and only during the period of high fever did it show a trace of albumen. Blood positive Weil-Felix three weeks after temperature became normal.

CASE 2, White man aged thirty-two, electrician, became ill October 14, 1927. Chill followed by fever 102, severe headache and general malaise, and marked constipation. Blood was negative for malaria and typhoid and paratyphoid. On the fourth or fifth day there appeared a very marked red slightly elevated macular eruption scattered over the trunk of body and flexor surface of arms and legs. The temperature remained high, 102 to 101 for fourteen days when it came down quite rapidly and did not become elevated again. Three weeks later the blood gave a positive Weil-Felix reaction, convalescence rapid. In both these cases it was noted that medicine had little or no effect on the course of the disease and very little effect on the symptoms. The diagnosis was finally made positive by the Weil-Felix reaction, which, coupled with the clinical picture, left no doubt on my mind as to the correctness of the diagnosis.

In conclusion, I wish to call your attention to the accompanying charts: Chart 1 shows the comparative seasonal incidence of the old world typhus as seen in Roumania during the period 1922-1925, as reported through the League of Nations, and that of sporadic typhus or Brill's disease as seen in the Southeastern United States in the same period; Chart 2 shows a similar comparison with the cases occurring in Florida during 1926-1927. These comparisons show definitely the difference in seasonal occurrence of the sporadic and epidemic types of typhus.

For the purpose of calling your attention to the increasing frequency of Brill's disease in Florida and the neighboring states the following maps are presented: A, showing the location of the typhus reported in Florida in 1926; B, showing the location of cases in 1927, and C, showing the location of the cases reported in Alabama, Georgia, South Carolina, North Carolina and Florida during the past few years (1922-1925).

My thanks are due Drs. F. A. Brink and Stewart G. Thompson of the Florida State Board of Health, Dr. T. F. Sellers of the Georgia State Board of Health, and Dr. D. G. Gill of the Alabama State Board of Health for valuable statistical data herein used, and to Dr. Elinor Hart-hill, Dr. Geo. F. Klugh and Miss Pearl Griffith for their careful laboratory examination, and Miss Nan Norris for her unfailing assistance in the preparation of the text.

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DISCUSSION.

Dr. F. A. Brink:

There are many differences between Brill's disease on the one hand and the old world typhus and Mexican tabardillo on the other. I want to review these points and emphasize them. The seasonal difference is especially significant. The old world type occurs in the winter season when people are crowded together for warmth and sewed up in their winter garments, giving opportunity for propagation of lice which are well known to transmit the infection, whereas in the endemic type, we very seldom find a condition where the patient is infested with lice and for the most part the patients are cleanly and well-to-do. The absence of contact infection is very noticeable in this type. From Brill's disease, attending physicians, nurses, hospital orderlies and other contacts are almost entirely immune, so immune that secondary cases are seldom seen.

The clinical manifestations of the disease might be dwelt on for a moment. In typhus, the onset is a little more sudden than in typhoid, and the recovery is quicker. The eruption is usually quite characteristic—at first maculopapular and becoming petechial.

There is very little known about the epidemiology of Brill's disease. The most outstanding thing is the fact that a large number of the patients have been employed in food depots, grocery stores and stock feed establishments. Negroes seem to be immune. I think there is perhaps only one case of Brill's disease reported in Florida in a negro.

I would like to discuss in closing the importance of considering the possibility of Brill's disease when one sees those cases that resemble

typhoid fever but which do not correspond entirely with the clinical characteristics of typhoid or agglutinate the typhoid bacillus. The State Board of Health Laboratory makes examinations on request. Fresh cultures of the bacillus can be made up at any time and the laboratory people are glad to make these tests. The first case that Dr. Bates called to your attention was recognized because the reaction was done not on account of any suspicion of Brill's disease, but because it happened to come in when somebody else had requested a test and Dr. Bates' specimen, sent in for the Widal, was run as a control.

We are very anxious to have reports of cases that are suspicious because of the fact that so little is known about the epidemiology of this disease. I would like to know about other cases that have occurred. Dr. Maxcy of the U. S. Public Health Service, having heard of the cases reported in this paper, will make a study of the disease during the coming summer.

Dr. E. C. Levy, Tampa:

In the early nineties true typhus fever was introduced into New York City and a number of secondary cases developed in the tenement sections. Many of these were treated at Mount Sinai Hospital, where I happened to be interne. Later, as Chief Health Officer of Richmond, I saw a number of sporadic cases, and during the past year (1927), as City Health Officer of Tampa, I have observed 29 more cases. What I shall have to say will be based largely on my personal experience.

Having a most wholesome dread of typhus, based on its history as one of the five major epidemic diseases, whenever we had a suspicious case in Richmond we at once wired the U. S. Public Health Service and Dr. Goldberger usually came within a few hours. All these cases were very mild, all were among white adults and all recovered. They were distinctly sporadic, without evidence of connection between any two of the cases.

The incidence of our Tampa cases during 1927 was as follows: January, 1; February, 1; April, 2; June, 4; July, 8; August, 8; September, 4; and October, 1—a total of 29 cases for the year.

All the cases were among whites, with a large proportion among the Cuban population. There were no young children. In no instance was there either history or evidence of lice. The homes, with very few exceptions, were of the average middle class. The cases were widely

separated geographically. There had been no previous intimacy between the patients or their families. Three of the cases worked in one of our cigar factories, but this was an establishment employing over 1,000 persons, so this was without significance. In no way was there any suggestion of direct contagion. All recovered except one, and here death was due to chronic heart and Bright's disease in a middle-aged man. In all cases except one (the fatal case, which died too early) a positive Weil-Felix agglutination test was secured.

Our 29 cases were reported by ten physicians. One doctor reported 7 cases, another 6, two others 4 each, another 3, and five doctors reported 1 case each. Moreover, the three doctors who reported 7, 6 and 4 cases respectively were a father, his son, and another doctor in close association with them. These men naturally discussed typhus a great deal among themselves and were constantly on the lookout for it. These facts inevitably suggest that if all our Tampa doctors had been equally alert many more cases would have been recognized and reported.

Just a word as to diagnosis. The onset is sudden, with severe headache and backache and high fever. There is extreme prostration. The patient takes to bed from the start. I have been particularly impressed by the deep, purplish flush of the face and the very congested eyes. These strongly remind one of measles at first glance. These symptoms, especially if the patient is a white adult and if the case is seen in the summer months, should always suggest Brill's disease. Later the eruption will appear.

The laboratory will be of help after about the tenth day. Agglutination of *Proteus* X 19, in dilutions of 160 or higher, is considered positive. If daily specimens are taken and blood that originally was negative becomes positive in 1 to 20 and then in 1 to 49 and then 1 to 80, this would be considered positive before it agglutinated in 1 to 160.

We cannot help being somewhat anxious as to whether this mild type of typhus, or Brill's disease, will build up in virulence year by year. Heretofore most of the deaths have been among older people with heart and Bright's disease, but last year, I am informed by Dr. V. H. Bassett, Health Officer of Savannah, there were two deaths in that city, a father and son, in previously well persons who quickly succumbed to a fulmi-

nant type of the disease, in every way identical with old world typhus.

We cannot but be puzzled by the seasonal distribution of Brill's disease, reaching its peak in the late summer, while old world typhus is largely a disease of cold weather. Absence of the louse in our mild form of the disease and its prominence in classical typhus is another puzzling point. These two points of difference suggest the possibility that, after all, we are not dealing with a mild form of true typhus. On the other hand, the symptomatology, the mutual immunity and the agglutination of *Proteus* X 19 in both forms makes this possibility very remote. It must be remembered, however, that the agglutination test is made with a saprophytic organism admittedly not the cause of typhus or Brill's.

Dr. W. A. Claxton, Miami:

In Miami we had a few cases in which we couldn't agree on the diagnosis and after wondering what these cases were, we procured *Brucella Abortus*, *Melitensis*, and *Proteus* X with a view to trying to find out, and we thought maybe it was *B. Abortus* or Malta Fever, but we didn't find this. We found one case that agglutinated to *Proteus* X about three weeks after he had apparently recovered, but it gave a very good reaction.

Dr. C. W. Bartlett, Tampa:

Several of these cases were in my own practice. The majority of the cases called to your attention by Dr. Levy were reported by a group of doctors who would get together practically every day and talk their cases over and therefore they were on the lookout for this disease.

I believe the reason why more cases were not reported was because the other doctors were not on the lookout for them. I believe it would be a good idea in all cases where we fail to get the Widal reaction to test for typhus fever. As the group above stated used to do this, many of their cases were found on blood examination to give a positive Weil-Felix.

I was called to see many of these cases, which, from the treatment and statement of the family, the physician in charge thought was typhoid fever.

Dr. W. P. Dickinson, Lakeland:

What I would like to hear now would be the management of these cases, how these cases are handled, and what has been done for them.

Dr. T. H. Bates, Lake City (closing):

I appreciate the discussion of this paper, and I think it is time interest in this disease was aroused. I had a case in which I filled out the report card as paratyphoid and submitted it to the Bureau of Communicable Diseases, who in turn called it typhus, to which I replied, "this man has no more typhus than you have." The State Board of Health sent Dr. Brink out to see if we could arrive at some conclusion. That is why I was keenly interested in taking up the second case which occurred just a couple of weeks or three weeks later.

As to management of the case, as the Doctor has requested, I would say that medication has absolutely no effect on the course of the disease. Hydrotherapy for high temperature in such cases and such analgesics as might suggest themselves to relieve pain was all that was used with any noticeable effect. I don't think there is any specific treatment for it. On the 14th day you will get a drop in temperature, and following that he will recover very rapidly. Referring to cases reported from Savannah, I might say there has been a very sharp increase in the cases reported there, 40 in 1926 and 12 in 1927, with six deaths. Deaths have not been noted or reported in the statistics that I have had from other communities.

SURGICAL DIAGNOSIS OF THE UPPER RIGHT QUADRANT*

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Hollywood.

The history in diagnosis of surgical affections of this region is of utmost importance. Heyd and Erdman of New York call attention to the facts that the primitive gastrointestinal tract is a simple tube occupying a midline position. Embryologically, it is divided into three portions—the foregut, the midgut and the hindgut. Anatomically, the stomach, duodenum, liver, biliary duct system and pancreas are derivatives of the foregut, and in this alimentary segment every digestive enzyme is secreted and the mechanical process of digestion carried out.

Our physiological conception of the stomach has undergone a rather extensive revision since the days of Beaumont. We may conceive, however, of the stomach as exercising primarily two important functions, that of secretion and that

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of motion. Contrary to the usually accepted idea of gastric physiology, the terminal portion of the stomach is alkaline, and in the fasting or resting phase of the stomach there is a reflux of duodenal materia; into the antral portion of the stomach, the acidulation and acid digestion of stomach contents taking place in the proximal two-thirds.

In interpreting the symptoms that arise from disturbances of the gastrointestinal tract we should have firmly in our minds two fundamental conceptions, one called by Bayliss the "law of the intestine," which states that stimulation of any part of the intestine leads to contraction above and relaxation below. This is a general law and is applicable to the entire alimentary canal. Essentially it means that under normal conditions contraction in one place is associated with relaxation just below. Metzler called this the law of contrary innervation. The second fundamental conception is what is called the "law of average localization," which explains why visceral pain is most accurately located in viscera which do not move, such as gall bladder, esophagus, duodenum, ascending and descending colon, and rectum, and less accurately in the more freely movable organs, such as the small intestines and stomach. The brain learns to localize sensations in the area of the average position of the part from which they originate. The importance of these two laws in the interpretation of the symptomatology of abdominal conditions is very great, and we must recognize that disturbance of one part of the alimentary tract may manifest itself by symptoms in some distant portion.

Probably the most frequent symptom numerically in abdominal conditions is that of dyspepsia. The stomach, by reason of its muscular apparatus and rather close proximity to the outside world by way of the esophagus, may be spoken of as the voice of the upper abdomen, and malfunction of the upper intestinal tract induces quite early the symptoms of indigestion. Again dyspepsia is one of the most common reflex disturbances of general constitutional disease.

The appendix, while not located in the upper right quadrant, nevertheless, has to be considered from a differential diagnosis standpoint. Its symptomatology is precise and, within the first 24 hours of its evolution, embraces the following chronological order of symptoms: (1) pain; this is epigastric, confined to the region of the umbilicus, and is colicky in type; (2) is followed by

nausea or vomiting or both; (3) generalized abdominal sensibility; (4) temperature; (5) leucocytosis and ascending polynucleosis. One can explain this chronological evolution of symptoms by consideration of the pathological sequence of events in the affected appendix. The infection arises on the mucosa in 95% of cases; it is associated with tumefaction and intumescence and we have as angulation of the appendix with occlusion of the lumen or occlusion of the lumen at the valve of Gerlach. At this stage we have essentially an empyema, and the products of the infection are retained within the lumen of the appendix under pressure. One of three things occurs: (1) gangrene of the appendix; (2) rupture, or (3) resolution by intracecal drainage of the contents of the appendix. These pathological states distinctly parallel the symptomatology.

At the time the infection begins in the appendix we have a point of irritation below the small intestine and we have a disturbance of the law of the intestine with the small intestine participating in an exaggeration of its normal peristaltic activity. As a result we have colicky epigastric pain from hyperactivity of the small intestine. The exaggeration of the function of the small intestine brings about generalized abdominal sensibility, and the activating agent in this trend of events is an infective process which produces the constitutional reaction of temperature, leucocytosis, and polynucleosis.

Turning to chronic appendicitis one is confronted with an entirely different evolution of symptoms. Here we have an infection that disturbs the rhythmic workings of the law of the intestine in that contraction is followed by relaxation. The most typical example of this neuromuscular mechanism is found at the cardiac, pyloric, ileocecal, and anal sphincters which normally relax as peristaltic waves come to them. The presence of a minor degree of irritation in the appendix brings about a disturbance of the neuromuscular apparatus of the ileocecal valve and pylorus. Barclay has shown that spasmodic closure of the pylorus follows stimulation of the terminal ileum. At the ileocecal valve we have a great biological partition. Here the chemical reaction of the intestinal contents changes, the bacterial flora reaches its maximum development, the fluidity of the contents is at its greatest, there is an anistalsis rather than peristalsis, and this is the place of predominant lymphoid tissue development within the abdomen, together with a

natural point of stasis or delay. The history, then, of chronic appendicitis is characterized by variability and lack of that precision which characterizes acute appendicitis. There stands out, however, in the history of these patients almost invariably the history of an acute attack, and one is surprised to find on checking up "after results" that the cases that complained of pain in the right lower quadrant have uniformly not been cured by the removal of the appendix, but that the cases that complained of atypical dyspepsia due to a supposedly diseased appendix have been almost uniformly cured of their distress by an appendectomy.

In disease of the biliary system we are confronted with a pathological and symptomatic sequence of events that is rather characteristic and definite. The basis from the production of symptoms is essentially due to infection in the gall bladder whether stones are present or absent. One recalls the rather high percentage of hepatitis that coexists with chronic cholecystitis, and the relationship of pancreatitis to disease of the biliary system is so thoroughly elaborated as to require little comment. The end result of cholecystectomy conclusively demonstrates that the patients are apparently in as excellent condition of health after cholecystectomy as before, and that, so far as the general metabolic processes of the body are concerned, the presence or absence of the gall bladder is not of much importance.

If one made a study of sufficiently large number of cases of biliary disease he would find that he could catalogue the patients into four distinct clinical groups: (1) those that complain of indigestion only; (2) those that give a history of acute attacks of biliary colic, with or without preceding indigestion; (3) those that give a history of biliary colic and also the history of jaundice; (4) those who give any of the above histories and develop the complications of biliary disease—carcinoma, pancreatitis, duodenobiliary fistula, etc.

The early symptoms of cholecystitis, whether calculous or non-calculous, are the symptoms of an indigestion of which the chief complaint is gas in the stomach. For a variable period of time these patients complain of a sense of weight and fullness in the stomach, present after small meals and relatively worse after large meals. Upon belching gas there is obtained some relief, and a not uncommon history is that of the patient

leaving the dinner table and inducing vomiting with complete amelioration of symptoms. The gas production is in a measure dependent upon the quality of the food—carbohydrates, fats, starches, nuts, and some fruits induce a greater degree of gas production. These patients are treated for nervous indigestion or gastritis when they have a chronically diseased gall bladder with thickened walls and a loss of the normal distensibility of the gall bladder. Into this history there may ensue at a later period or without this history of indigestion the first indication of biliary trouble, ushered in by an attack of acute, sharp, agonizing pain which comes on like a stroke of lightning, is of maximum intensity and is associated with restlessness and movement upon the part of the patient. There is a strong desire to lean over a chair or grip the lower portion of the thorax. With this is usually associated nausea and vomiting. The attacks of pain have a predilection for nocturnal occurrences and are so severe as to require hypodermics or morphine for their control. The characteristic and outstanding feature is the lightning-like onset of the pain, without premonition or warning, and its intensity requiring morphine. After four to eight hours the pain disappears almost as rapidly as its onset, leaving behind a residual soreness along the right costal margin. The third clinical group is characterized by a history somewhat after the fashion of the preceding types, with the exception that after an attack like the above they find themselves jaundiced, and in this group we have a trinity of symptoms—colic, jaundice, and sepsis cholangitis. This jaundice is associated with colic and usually with chills, fever and sweating and for many years masqueraded under the title of Charcot's intermittent hepatic fever and was variously ascribed to malaria.

Jaundice is a symptom of sufficient magnitude to make the patient apprehensive. If one considers the diagnostic possibilities he will find that aside from catarrhal jaundice—a condition founded upon insecure pathological information—which is characterized by slight constitutional disturbance and uniformly resolves and clears up in four to six weeks, we have essentially a differentiation of jaundice produced by neoplasms and the jaundice produced by calculous disease of the biliary apparatus. Stupor is only associated with jaundice in cirrhosis and acute yellow atrophy, while emaciation is uniformly

present in all types of chronic jaundice, irrespective of the etiological factor. The onset of jaundice with colic predicates an infective process, and since 98 per cent of all gallstones have had their origin in infective changes in the gall bladder, we find that the gall bladder in chronic calculous cholangitis is atrophied, thickened or undergoing fibroid contracture and is non-palpable on physical examination unless there is an accidental occlusion of the cystic duct with hydrops of the gall bladder.

Ulcer of the gastroduodenal segment is located anatomically in three main places: (1) in the silent area of the stomach with no pyloric involvement; (2) on the pyloric segment with obstruction from spasm of invasion; (3) in the duodenal segment. Eighty-eight per cent of all ulcers are characterized by a regular and uniform symptomatology and three symptoms stand out in unusual prominence: (1) pain that bears some relationship to the time of ingestion of food; (2) chronicity—the symptoms extending over a considerable period of time, and (3) periodicity—in that the symptoms recur in exact similarity day after day with almost unvarying precision. Eighty-five per cent of all ulcers of the stomach are situated on the pylorus, antrum or the adjacent three-fourths of the lesser curvature and it is the regularity in the symptomatology of ulcer that make the diagnosis possible. A loss of the periodic element with symptoms which suggest ulcer makes one suspicious of malignancy, for 99 per cent of the malignant growths of the stomach show an absence of periodicity in their symptomatology. Depending upon the localization of the ulcer we have certain specific features that go with each one. The ulcer in the silent region of the stomach is, as a rule, characterized, in addition to the above mentioned symptoms, by the early habit of vomiting, the vomiting of undigested food with a tendency to be blood-streaked. The pyloric ulcer has early induced in its symptomatology a motor insufficiency with stagnation of gastric contents and vomiting of large quantities of retained gastric content and food remnants of a previous day's ingestion. The duodenal ulcer has characteristically added to these three major symptoms nocturnal occurrence, usually after 12 p. m., and the complete alleviation of symptoms upon ingestion of food, while all three types of ulcer acquire, early and independent of the physician's advice, the bicarbonate of soda habit.

The ulcer near the cardia frequently, but not invariably, produces pain almost immediately after the ingestion of food; the ulcer at or near the pylorus from an hour and a half to two hours, while the pain in duodenal ulcer is much more constant in the time of onset, being between two and a half hours to three hours after a meal.

There are no symptoms which are pathognomonic of cancer, and at the time that one most desires to make a diagnosis of cancer there is no outstanding clinical picture that renders this possible. The presence of carcinoma of the stomach is made known only when ulceration occurs or when there is an interference with the evacuation of the stomach contents. In general, carcinoma of the stomach manifests itself early by mechanical factors rather than by changes in chemistry. Cachexia is one of the most prominent symptoms, being present in approximately 85 per cent of cases that are diagnosed as carcinoma. A palpable tumor exists in about 58 per cent, food remnants in 65 per cent and pain is present in over 85 per cent of cases. We find cancer of the stomach clinically portrayed by three quite distinct types of history: (1) the first group, constituting about 60 per cent, occurs in patients who have had a history of gastric distress covering at least a period of eight to ten years. This previous gastric history entitles us to believe that the patient was suffering from chronic gastric ulcer. There were repeated attacks of pain occurring day after day, with a time relationship to the ingestion of food and with a periodic reproduction of the same symptoms day after day. Into this history there comes one attack from which the patient does not recover or does not respond to a form of medicine treatment that has heretofore proved beneficial. The pain becomes constant, marked distaste or aversion to food is acquired, blood is constantly present in the stool and the patient has a duration of cancer symptoms of six months. The second group constitute 30 per cent and occurs in the type of man who has previously been perfectly well. He has an attack of gastric distress which suggests an acute ulcer of the stomach, with or without hemorrhage. At the end of a few months the man has lost physically beyond anything that could be expected in a simple ulcer, and all too soon a progressive anemia and emaciation and beginning cachexia make known the diagnosis of rapidly growing carcinoma; his cancer symptoms average about eight to ten

months. The third group is represented by approximately 10 per cent, with a history that is suggestive of simple ulcer from which he nearly recovers, but never quite wholly, and after a variable period of time—14 to 18 months—slowly but progressively becomes worse, acquires a marked aversion to food, and progresses into the well-defined cachexia of malignancy.

In differentiating gastric and duodenal ulcer, we may say that duodenal histories have a longer course in years (11 per cent) than do gastric, perhaps in part because there is less chance of latency when they are situated in the duodenal area. The longer the history the more likely is the ulcer to be duodenal. The higher the acid, the lower the ulcer. Hemorrhage is more often present in gastric ulcer. More duodenal ulcers than gastric ulcers are diagnosed as gall bladder trouble. Position (reclining) and pressure ease are more indicative of gastric than duodenal ulcer. Night pain is more frequent in duodenal ulcer. Ease before the next meal occurs more often in gastric ulcer. The higher ulcers seem to run shorter attacks, are repeated more often or with only remissions. The size of the ulcer seems to have quite as much or more influence on symptoms than has the position. Small ulcers with high location often give clear-cut duodenal ulcer history. Large ulcers, wherever situated, give shorter food ease; they tend to constant symptoms; more remissions than intermissions; food is more apt to give immediate distress, and the patient is easier with the stomach empty. These ulcers lose type.

The roentgen ray does locate the disease whenever its findings are positive; therefore, its influence is striking and it has the exactness that the clinical histories lack. But the X-ray has its difficulties, and we need all our combined forces to make a respectable showing. We see no great benefit to the patient in such exact localization so long as the peptic lesion is diagnosed and the patient gets proper medical or surgical attention. However, it is a comforting sort of feeling when later the X-ray or surgery proves the accuracy of one's observations.

Vomiting or passing blood may be a factor in diagnosis, but a diagnosis of ulcer should be made without the evidence of hemorrhage, as a diagnosis of gall-stones should be made before jaundice, save in those cases in which hemorrhage is the first or only symptom of ulcer, and jaundice the first or only symptom of gall-stones.

In this stage the symptoms, their time of appearance and control, are still usually clearly defined and a diagnosis may be easily reached.

Still later, when complications have arisen, perforation, adhesions, large ulcers, contractures, obstructions and the like, the symptoms may take on varied hues and we are at a loss, unless we have been careful to get our early definite history. The symptoms now may be greatly prolonged, never quite clearing up, or they may be continuous, with gradually increasing invalidism. Pain increased or not eased by food, food soon adding distress, sour, bitter, burning eruptions and vomiting of large quantities, loss of weight, decided obstruction and cachexia may be present. Vomiting, irrigation and alkalies usually bring some degree of ease. The history is that of stomach and we can usually by exclusion reach a respectable diagnosis. The early history is here a great illuminating factor and the roentgen ray is a comfort, as it is, indeed, in all stages of peptic ulcer.

There is a class of ulcer cases not so large but quite distinctive and extremely difficult to diagnose. Clinically they are diagnosed gall-stones. These ulcers are often duodenal or pyloric but may be gastric. They seem to have no complications save frequent perforating tendencies, yet a part are not so reported at operation. Often the only symptom complained of is sudden, acute, short attacks of epigastric pain, rarely with radiation, but which may radiate to the back if posterior perforation is impending. Recovery from pain is usually sudden and complete, typically gall-stones in character and no other rational diagnosis can be made save by the aid of the X-ray. In the group of cases under discussion, the roentgen ray and the surgeon must disclose the condition, or, when no operation is done, characteristic symptoms develop later. In the larger group of chronic complicated ulcer cases with perforation, the early history gives the solution.

In conclusion, we may say: (1) that surgery of the upper right quadrant is as marked major surgery as we encounter in any region of the body; (2) that the history and differential diagnosis of the affected parts of this region is quite important, and, that on the whole not so easily differentiated, but on the other hand with the thorough study of symptoms and clinical pictures along with the aid of the roentgenologist, the diagnosis may be made to a certain degree of satisfaction.

SPINDLE CELL SARCOMA OF THE KIDNEY—CASE REPORT*

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History: M. A., male, aged 44, Italian, was admitted to the Urological Division of Jackson Memorial Hospital July 12, 1927, complaining of fever, malaise, chilly sensations, and a deep, dull ache in the left lumbar region. Occasionally this pain became more intense and presented all the characteristics of severe renal colic. Symptoms first became evident five months ago. He was referred to a competent urologist two months later and on finding a small shadow in the middle calyx together with a large amount of pus in the left kidney specimen, was given pelvic lavages and dilatations directed toward the relief of what was thought to be calcareous pyonephrosis. He continued to lose weight, was unimproved, and occasionally passed small quantities of macroscopic blood. He did not, at any time, pass blood in sufficient quantities to suggest hemorrhage. On account of the patient's inability to speak English, it was very difficult to obtain an accurate history. He came under our observation August 1st, 1927.

Examination: For the sake of brevity, we will omit the complete physical examination as unimportant. When first seen by us, he appeared markedly undernourished, cachectic, and had apparently lost much weight. On attempting to palpate the left kidney, we immediately encountered a large, firm, but freely movable mass, which suggested a large pyonephrotic kidney. Patient complained of moderate pain on deep palpation and stated that the mass became smaller at times. Blood pressure, 140 systolic; 95 diastolic. Wasserman, negative. No other blood work was done.

Course: Patient at this time was running a septic temperature as high as 103 and often preceded by a chill. He was cystoscoped August 3d, and, while a large amount of pus and blood were evacuated from the left kidney, the right specimen was normal. The left kidney only eliminated 5 per cent pthalein during the first half hour. The right kidney function was slightly above normal. Pyelograms and plain films made of the left kidney showed the upper border of the kidney distinctly outlined. The calyces were markedly distorted and seemingly displaced upward toward the upper pole. The lower and middle calyces could not be identified

except as very vague shadows without contour. Beginning about two inches below the upper pole of the kidney, the shadow of the kidney outline gradually faded away. The lower pole could not be outlined. As these findings were verified by repeated pyelograms, the diagnosis of tumor of the left kidney was made and the patient nephrectomized August 14th. The kidney was about three times the normal in size and was easily delivered. Adhesions were very few, and seemingly there was no metastasis by direct invasion of surrounding tissue. At the lower pole, the normal parenchyma was entirely displaced by a nodular mass of grey or greyish white color. The outer surface of the kidney was especially nodular. At the center of the kidney, a large hemorrhagic area, evidently due to cyst formation or myxomatous degeneration, was seen. A very small portion of kidney tissue remained at the upper pole. Examination of the specimen by Dr. Stowe proved the pathology to be that of spindle cell sarcoma of the kidney.

Remarks: Spindle cell sarcomas are grouped with a variety of renal growths of connective and mixed tissue derivation under the heading of embryonal tumors. As to the etiology, by far the most thorough and comprehensive work has been done by Birsch-Hirschfeld. This observer called attention to the close relation of the Wolffian body to primitive kidney tissue, and conceived the idea that in the embryo Wolffian body inclusions, becoming incorporated in the developing kidney, might be the origin of rhabdomyomas and adenosarcomas. Willms developed the hypothesis further, suggesting that the striated muscle had its origin in bits of myotome which became displaced and included in the kidney, bone and cartilage having a similar origin from the vertebral anlage. Malignant tumors of the kidney of any type are relatively rare. Kelyack found only six primary cancers of the kidney out of 1,400 patients suffering with cancers elsewhere. Muller, in 521 cases of cancer, found only three of the kidneys. Hypernephromas are by far the most common malignant tumor met with in kidney work, being twice as common as all the tumors of the embryonal group combined. In Cabot's series of 31 tumors of the embryonal group, only three were spindle cell sarcoma being greatly outnumbered by the mixed tumors. Unlike hypernephroma, the sarcomas are much more likely to metastasize by direct invasion than by involvement of the veins. Walker found that 50 per cent of the sarcomas coming to operation had not metastasized.

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SPINAL ANESTHESIA*

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Spinal anesthesia is the loss of sensation obtained by puncture of the spinal dura mater and arachnoid with the injection of an anesthetic solution into the subarachnoid space. This solution acts upon the nerve roots and has very little or no action upon the spinal cord.

HISTORY

It was Dr. J. Leonard Corning¹ who, in 1886, first produced spinal anesthesia. He injected two per cent cocaine solution into the lower dorsal region of a dog. This caused paralysis of motion which was soon followed by complete recovery. His next experiment was upon a man suffering from a sexual disturbance. Thirty minims of a three per cent cocaine solution were injected between the eleventh and twelfth dorsal vertebra. No anesthesia resulted, so another injection of the same drug was given. This produced incoordination of the lower extremities and anesthesia to such a degree that urethral sounds were passed without causing pain. It was not Doctor Corning's intention to inject the cocaine solution directly into the canal. He believed that if it were injected near the veins in the vicinity of the spine, the drug would be carried to the cord and anesthesia produced. However, the result which he obtained suggests that the dura was punctured and that the injection was not paravertebral, but intrameningeal.

Aided by the discovery, in 1891, of lumbar puncture by Quincke, Augustus Bier,² of Bonn, Germany, also investigated this form of anesthesia. In 1898, he allowed the method to be tried upon himself to more accurately observe its effect. Bier used a solution of cocaine. He developed the technique of its injection into the subarachnoid space to such a degree that others were convinced of its value as an aid in surgical procedures upon the lower extremity. However, Bier temporarily abandoned this form of anesthesia as he feared the toxic action of cocaine.

Tuffier,³ of France, with admirable courage and despite considerable opposition continued and popularized this method of anesthesia, extending its application to operations upon the pelvic and abdominal organs.

As statistics accumulated it was found that the mortality rate from spinal anesthesia was

much greater than that from anesthesia induced by ether. This caused most surgeons to abandon the use of the method. Fortunately, with the advent of tropococaine, stovaine and novocaine, interest in this form of anesthesia was revived and the method perfected to such a degree of safety that much of the opposition to its use has vanished.

ANATOMY

The spinal cord terminates at the lower border of the first lumbar vertebra, in a cone-shaped end, the conus medularis. In women and children it ends at a lower level and occasionally may extend to the third lumbar vertebra. The filum terminale is a process of pia which extends from the conus medularis to be attached to the base of the coccyx. On the lateral aspect of the spinal cord, the roots of the spinal nerves are to be seen as they leave and enter the nervous tissue. The anterior roots are motor and the posterior are sensory in function. Below the conus medullaris the roots of the lumbar and sacral nerves, passing downward to their foramina of exit from the vertebral canal, form a bundle which is known as the cauda equina. In the mid-lumbar region the cauda equina lies in two bundles, one on each side of the mid-line. The cauda equina is surrounded by the dura and arachnoid.

The gangliated cords of the sympathetic nervous system are situated on either side of the vertebral column and are connected to the spinal nerves by the rami communicantes. There are usually two rami communicantes to each ganglion. One of these branches is white, composed of medullated nerve fibres, which come from the spinal nerves and go to the sympathetic nerves. The other branch is gray, composed of non-medullated nerve fibres, which come from the sympathetic ganglion and go to the spinal nerves to be distributed principally to the blood vessels and glands in the course of these nerves.

ACTION OF SPINAL ANESTHESIA

When an anesthetic drug is introduced into the subarachnoid space it interrupts² conduction in the motor nerve roots, the sensory nerve roots, and in the rami communicantes, in those segments with which it comes in contact. The patient soon after the injection of the drug feels a tingling in the legs followed by heaviness and numbness. Usually, in from three to five minutes, there is complete anesthesia with paralysis quickly extending from below upwards. How-

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ever, it does not reach its greatest height for ten minutes after the injection. As the anterior nerve roots are less exposed to the drug than the posterior nerve, it occasionally happens that a patient may have complete analgesia and retain motor power. Often the tactile sense is retained after there is a complete loss of pain sense.

Circulation.—Spinal anesthesia has its most notable effects upon the circulation and a fall in blood pressure varying from twenty to more than one hundred millimeters of mercury accompanies each spinal injection. This is easily understood by recalling that the vasomotor centers for the head, neck, upper extremity and thorax are situated in the upper thoracic cord, those for the lower part of the body are located in the lower thoracic and upper lumbar region of the cord. Therefore, with paralysis of the vasomotor nerves and the relaxation of the voluntary muscles, an increased quantity of blood accumulates in the large splanchnic veins.

The heart works more slowly. This is due to lowered blood pressure lessening the intracardiac pressure, thus the stimulus to cardiac action is lost. The inhibitory nerves of the heart (vagi) are unopposed due to the fact that many of the sympathetic nerves which normally stimulate the heart have been blocked off by the anesthetic drug. If the upper dorsal segments are involved, the pulse rate may drop to thirty and the blood pressure at the wrist almost to zero.

Respiration.—If the anesthetic effect of the drug is confined below the diaphragm, very little change is noted in the respiratory rate or volume. However, if the lower dorsal segments of the cord are involved, the muscles of the thoracic wall become paralyzed, the respiration slow and shallow and largely diaphragmatic in character. Another effect of lower dorsal segment involvement is a tremendous fall in blood pressure resulting from vasomotor paralysis. This causes anemia of the brain with diminished function of the respiratory centers and which may be carried to such a degree that their function is arrested.

Relaxation.—Complete muscular relaxation is the rule with spinal anesthesia.

Abdomen.—The abdominal walls are completely relaxed and flaccid, thereby enabling the surgeon to operate with less difficulty and much less traumatism to the tissues than when a general anesthetic is used.

The sympathetic nerve supply, which normally inhibits intestinal movements is paralyzed, leav-

ing the vagus and the nerve plexuses in the intestinal wall unopposed in their stimulating functions. As a result, the stomach and intestines are contracted and peristaltic movements are much increased. The external sphincter ani is relaxed due to paralysis of its spinal nerve supply.

Kidneys.—Spinal anesthesia has no irritative or other effect on the kidneys. Examination of the urine before and after injection shows no change. When the ureters are catheterized² the kidneys are found to be secreting as well as if the patient were not anesthetized.

Liver.—It has no effect on this organ.

Skin.—The skin remains dry and warm.

Reflexes are abolished.

Nausea and Vomiting are not uncommon, occurring in about seven per cent of patients. It most frequently happens while the patient is on the operating table and is transient. As a secondary symptom it is very rare.

Cord.—Spinal anesthesia is a nerve root anesthesia and has little or not effect on the spinal cord.

MECHANICAL CONDITIONS

In discussing the action of spinal anesthesia the mechanical conditions of the solution and of the spinal canal must be considered. They greatly influence the action of the drug and the anesthesia produced. If the solution is of the same density as the spinal fluid it mostly remains at the point of introduction; if lighter, it ascends in the canal and descends if heavier.

Dr. A. E. Barker advocated solutions of a higher specific gravity than the cerebrospinal fluid. To accomplish this he added glucose. When injected below the third or fourth lumbar vertebra the solution descends whether the patient be sitting or lying on the back, owing to the natural anterior curvature of the spine in this region. If introduced between the third or fourth lumbar vertebra or higher, it will ascend, when the body is lowered, to the point of greatest convexity of the dorsal spine, which is about the fifth or sixth dorsal vertebra. The solution remains for the most part wherever gravity determines.

Dr. W. Wayne Babcock³ reverses the procedure of Barker and advocates solutions of a lighter specific gravity than the cerebrospinal fluid. He uses absolute alcohol to accomplish this.

Heim-anesthesia may be obtained by keeping the patient on one side.

Diffusion of the anesthetic solution in the cerebrospinal fluid is a slow process, and may be hastened by changing the position of the patient, this action causing oscillation in the cerebrospinal fluid.

ANESTHETIC SOLUTIONS

Cocaine Hydrochloride is an alkaloid derived from coca erythroxyton. It was used by Corning and Bier only to be abandoned because of its toxicity. However, in a more purified form, it is again being used by many continental and some American surgeons. The subarachnoid dose is 0.01-0.05 gms. Since the early days of spinal anesthesia, various synthetic agents have been introduced as substitutes for cocaine and to these discoveries belong the credit for the renewed interest in this form of anesthesia. Those which have had an extensive use are stovaine, procaine, apothesine, alypin, butyn.

Stovaine.—This synthetic substance was introduced by Fournau in 1904. It appears in small brilliant scales and its solutions are not decomposed by boiling. It is freely soluble in water and is slightly acid in reaction. When absorbed into the general system its toxicity is said to be one-half that of cocaine. Stovaine acts with like intensity on the anterior and posterior nerve roots and upon their vasomotor fibres. The fall in blood pressure is of shorter duration than that produced by butyn.⁴ The maximum dose is .02 grams.

Procaine or novocaine is a colorless, crystalline substance, soluble in its own weight of water, neutral in reaction, and is not damaged by boiling. Experiments on animals indicate that it is one-seventh as toxic as cocaine and is lowest in point of toxicity of any of the drugs in this class. However, double the dose of stovaine is needed to produce anesthesia, which in practice greatly lessens the difference in toxicity. In spinal anesthesia procaine acts with more effectiveness on the posterior than the anterior roots of the spinal cord. It will cause perfect anesthesia, but does not produce a muscular relaxation equal to that produced by stovaine. The average dose is .1 to .12 grams.

Apothesine appears in snow-white crystals and is readily soluble in water. The Council on Pharmacy and Chemistry of the American Medical Association states in its recent report that the toxicity of apothesine is to the toxicity of cocaine as twenty is to fifteen and that it has about twice the toxicity of procaine. It has

much the same action as procaine except that the anesthesia produced is more rapid and prolonged. None of its anesthetic properties are destroyed by boiling. Apothesine is placed on the market in small hypodermic tablets, also in ampules containing the drug itself or its solutions. The average dose for an adult is 0.1 to 0.12 gms.

Tropococaine is a vegetable alkaloid and is derived from coca erythroxyton. It is only one-half as toxic as its sister alkaloid cocaine. It is now being less frequently used for the induction of spinal anesthesia as the results obtained have been unsatisfactory.

Butyn is a synthetic product, more toxic than stovaine and procaine. When injected intradurally, it depresses the vasomotor fibres of the spinal nerves to a greater degree than stovaine or procaine, thereby giving a prolonged fall in blood pressure. Because of the hypotension caused and its toxicity, this drug is seldom used in producing spinal anesthesia. To induce anesthesia 0.03 gms. is required.

The use of so many different drugs for the induction of spinal anesthesia suggests that the ideal drug for this purpose has not as yet been found.

PREPARATION OF PATIENT

There is no need for such stringent preparation of the alimentary tract as is demanded for the administration of a general anesthetic.

Morphine sulphate grains 1/6 and scopolamine hydrobromide grains 1/100 are administered hypodermically before operation. This greatly benefits the psychic condition of many patients and they come to the operating room indifferent and oblivious to their surroundings. The effect of the scopolamine and morphine may be increased if the patient's ears are plugged with cotton wool and the eyes covered with a bandage, so as to more or less completely shut out the stimuli of sound and light.

TECHNIQUE

Position.—The patient sits across the operating table and should lean a little forward with the back well arched. This position is more convenient for the anesthetist, but is not so favorable for all kinds of patients. Occasionally, patients are unable to sit up; this makes it necessary for them to assume the lateral recumbent position, with the back well arched. After the injection the patient should be turned immediately on his or her back to insure an even distribution of the anesthetic to both sides of the cord.

Landmarks.—A sterile towel is held between the crests of the hip bones, the edge of the towel crosses the spinous process of the fourth lumbar vertebra. After this is located it is usually very easy to palpate the spinous processes of the other vertebra. Or a perpendicular line⁶ measuring five centimeters, dropped from the twelfth rib on the midline of the back, marks the spinous process of the twelfth dorsal vertebra.

The instruments necessary for the induction of spinal anesthesia are few in number and vary with the technique developed by different operators. The author in his work has followed the technique as developed by Doctor Babcock,⁵ a two mil. all glass, Luer syringe and a needle of nickeloid or platinum, gauge 20, nine centimeters long, with a sharp but obtuse concave point and a well-fitting stylet are the instruments required. The solution injected is put up in ampules each containing stovaine .08 grams, lactic acid .02 mil, ethyl alcohol pure .2 mils., distilled water to make 2.0 mils. The ampule made of non-soluble glass is sealed and pasteurized on three successive days at a temperature of 65° C. for thirty minutes. The syringe and needle are boiled in distilled water in a separate basin and brought to the operator while boiling hot. The ampule containing the anesthetic solution which has been sterilized by immersion in alcohol, is dried and opened by an assistant. The operator draws this into the hot syringe, thereby warming it to about body temperature. The needle is then inserted through the midline at the middle of the interspace and perpendicularly to the skin. As soon as the resistance of the interspinous ligament is felt, the stylet is withdrawn and the needle carried cautiously forward until the snap is felt as the dura is punctured and a few drops of cerebrospinal fluid allowed to escape. The injection should not be given unless clear cerebrospinal fluid runs freely from the needle. The syringe is attached and the injection made rather slowly, without undue force, first injecting about one-half the contents of the syringe, then more new fluid aspirated and the syringe again discharged in the same way, leaving less fluid in it each time so at the end of four or five injections it is emptied.

The solution is of a lighter specific gravity than the cerebrospinal fluid. After making the injection the patient is quickly laid upon the operating table and the head and shoulders low-

ered so that they are at least two inches below the hips.

The interspace selected depends on the site of the operative field. For upper abdominal work the twelfth dorsal interspace is used. For lower abdominal work the first lumbar interspace is used. For operations upon the legs the second lumbar interspace is used. For operations upon the rectum and perineum the third or fourth lumbar interspace is used.

The dose for an adult is 1.0 to 1.5 mils. of the stovaine solution.

Procaine or novocaine is used by many operators. The method of injection varies with different surgeons. The average dose is 120 mg. of sterile novocaine crystals dissolved in 2 to 3 cubic centimeters of spinal fluid. After withdrawal of the needle the patient sits upright for five minutes and is then slowly laid down. Gellhorn states that the upright position is maintained for that length of time to allow the greater portion of the novocaine to be absorbed and held fast by the nerves of the cauda equina. What is left of the novocaine diffuses into the spinal fluid and when it finally reaches the medulla it is too dilute to effect the respiratory center. Labat and others have the patient lie down immediately with a pillow under his head.

Rytina and Tolson⁸ use apothesine. After trying various solutions of the drug they now use apothesine in powder form. The ampules contain 0.12 grams and this is dissolved in two or three mils. of spinal fluid. They allow ten to twenty-five mils. of cerebrospinal fluid to escape before making the injection of the anesthetic drug.

Jonnesco² advocates the use of injections over the spinal cord proper. He uses stovaine to which strychnine sulphate has been added, claiming that the strychnine combats the depressing respiratory effect often seen from high injections of stovaine. His points of injection are the medio-cervical, upper dorsal, dorsal lumbar and lumbar. He varies the dose according to the height of anesthesia desired and the condition of the patient. According to Jonnesco, failure to observe these conditions is responsible for such fatalities as have occurred in the practice of other surgeons using his method.

Le Filliatre's⁶ special technique, called "barbotage," demonstrates the possibility of obtaining anesthesia of the entire body by subarachnoid injection of cocaine through the lumbosacral

space. A large spinal puncture needle is required for this work.

Delmas⁹ modified Le Filliatre's technique and it is as follows: the dura is punctured at the fourth lumbar interspace, twenty-five mils. of cerebrospinal fluid are withdrawn and twenty mils. of this discarded. An ampule containing from 0.01 to 0.05 grams of dry cocaine crystals is opened, and from three to five mils. of cerebrospinal fluid mixed with the cocaine. This is drawn into the syringe which is then adjusted to the needle and twenty mils. of new spinal fluid drawn into it. The contents of the syringe is now thrown forcibly into the subarachnoid space, the height of the anesthesia depending on the force used. The time required for the operation guides the surgeon as to the quantity of cocaine to use; 0.01 gram giving an anesthesia lasting fifteen minutes, 0.04 grams for one to one and a half hours. Doctor Delmas reports four hundred and thirty-one patients operated upon while under this form of anesthesia with "no failures, no mortality."

POSTOPERATIVE CARE

The subsequent nursing of patients having had spinal anesthesia is much simplified and an uneventful recovery from the anesthetic is usual. Vomiting may occur but is rare. The great muscular restlessness seen in patients recovering from ether anesthesia is absent, thereby preventing any undue strain upon the wound. Abdominal distension is noticeably absent. Patients may take nourishment soon after leaving the operating table. As the effect of the anesthetic wears off, morphine may be given to relieve pain. Control of the relaxed anal sphincter returns with the disappearance of the anesthetic.

OPERATIVE AND POSTOPERATIVE COMPLICATIONS

The after effects from spinal anesthesia usually occur at periods closely related to the time of injection and are chiefly dependent upon the fall in blood pressure. In some patients the blood vessels seem incapable of accommodating themselves to the sudden change and this is indicated by pallor of the face, cold sweats, weak pulse and very shallow and slow respiration. Respiratory failure is due to anemia of the brain brought on by the fall in blood pressure. At the Samaritan Hospital¹⁶ alcohol, atropine, strychnine, caffeine and pituitrin have been extensively used to combat this condition, but these drugs have little or no effect on raising blood pressure. In cardiac conditions, digitalis may be of some

value when administered several days before operation, thereby enabling the weakened heart to better withstand such a sudden fall. When needed at operation, a small amount of ether may be given by inhalation as it increases the blood pressure from two to twelve millimeters of mercury. Very light gas oxygen anesthesia has the same effect. Inhalation of aromatic spirit of ammonia will raise the blood pressure from six to twelve milligrams. However, adrenalin chloride given intravenously is the best antidote. The average amount used is from two to fifteen minims of a 1-1000 solution. This should be administered slowly and in dilute solution. In respiratory failure institute artificial respiration and if the heart stops beating, immediate cardiac massage and normal saline solution containing adrenalin chloride, should be given intravenously.

Ephedrine, that drug known to Chinese medicine for more than 5,000 years, gives promise of overcoming the fall in blood pressure. Its action is similar to epinephrine but is more prolonged. Given .1 gm. subcutaneously it restores the arterial tension by the spinal injection.¹¹

Nausea and Vomiting occasionally occur on the operating table. The condition is improved by insisting that the patient breathe through his or her mouth. It very rarely happens as a postoperative symptom and when it does, is very transient in character. In a few cases it may persist for twenty-four hours and is best treated by gastric lavage.

Headache.—Postanesthetic headaches, frequent in the early days of spinal anesthesia, are now rare, but in some patients they do occur a few hours after the injection. Treatment consists of putting an ice cap on the patient's head and quietness, with the administration of a few doses of aspirin. If persistent, a spinal puncture should be performed with the patient in the lateral recumbent position and from fifteen to twenty-five mils. of spinal fluid withdrawn.

Ocular Palsies.—With the introduction of aseptic alcoholized solutions of the anesthetic drug twelve years ago, abducens palsy has not occurred as a postoperative symptom in the spinal anesthesia work at the Samaritan Hospital.⁵ However, some clinics report its occurrence.² It lasts but a few hours and needs no treatment. The pathogenesis of these palsies has not been satisfactorily explained.

Paraplegia.—Postanesthetic paraplegia is

probably due to the development of conditions already existing at the time of anesthesia. It is possible that a careful study of the patient would have revealed syphilis as the causative factor rather than the anesthetic.

Infection of the spinal fluid. Aseptic technique eliminates this condition as a complication.

Poisoning is possible in patients with hypersusceptibility to the anesthetic drug used. However, the large amount of novocaine used in infiltration anesthesia, with almost no mention in the literature of poisoning, indicates that the normal individual runs very little risk from the small amount of drug used in an intradural injection.

ADVANTAGES OF SPINAL ANESTHESIA

Spinal anesthesia is indicated for practically all major operations below the diaphragm, as it induces a perfect anesthesia with complete muscular relaxation and gives a degree of safety which equals or surpasses that obtained from the administration of a general anesthetic. It protects the patient against impulses from the field of operation, thereby abolishing or very greatly reducing the amount of shock associated with long surgical operations. Due to the fall in blood pressure, there is much less hemorrhage at the time of operation and less tendency to secondary hemorrhage.

Rapidity.—By the time the patient's skin has been painted with iodine and the surgeon has put on his gloves, that is, from three to five minutes, the patient is ready for operation.

In abdominal and pelvic surgery spinal anesthesia finds its greatest field of usefulness. The complete relaxation of the abdominal walls allows the surgeon to operate through a smaller incision. The contracted condition of the intestines reduces the handling of sensitive viscera to a minimum. There is no protrusion of the bowels through the incision, as so often happens with other anesthesia. Intestinal distention is often relieved by the increased peristalsis resulting from paralysis of its inhibitory fibres. This, together with relaxation of the sphincter ani, is often responsible for the immediate emptying of the bowel while the patient is on the operating table. Functional intestinal obstruction has been entirely relieved by an intradural injection alone.⁵

Pelvic surgery, especially, is facilitated by the extreme relaxation of the abdominal muscles. Deep-seated organs may be explored more easily with a patient under its influence than with any form of general anesthesia.

Prostatectomy.—The reduced functional capacity of the kidneys, together with the great relaxation obtained under spinal anesthesia, recommends it as a most valuable aid in this department of surgery.

Smith³ reports two hundred and fifty cases of which one hundred and one received spinal anesthesia. The gross mortality for the series was 18.8 per cent. The mortality in the spinal anesthesia series was 21.4 per cent. He states that the trouble was with the patient and not with the anesthetic and further explains that if ether or gas oxygen instead of spinal anesthesia had been given to this particular type of patient, they would have died in even greater numbers. In spite of his high mortality he believes that spinal anesthesia is a safe and most satisfactory anesthetic.

Also, it is practical in cases of stricture,¹⁰ especially in those patients where there has been an over-distended bladder for a long time and a kidney function reduced below normal. In these cases ether adds to the unfavorable prognosis; with spinal anesthesia the stricture can be cut, the patient can immediately begin to drink water and the prognosis thereby helped. Meredith F. Campbell of Bellevue Hospital, after 536 inductions, states, "For our work, urological surgeons, it is the ideal anesthetic."

Kidneys.—Disease of these organs, even a mild case of nephritis, may be made much worse by general anesthesia. Spinal anesthesia having practically no effect on the kidneys, is indicated in these conditions.

Pregnancy.—As no nerve connection exists between mother and child, it follows that the child is not affected when the mother's pain sense is inhibited or blocked off by spinal anesthesia. The child cries as soon as born and does not show any effects of the anesthetic. Hemorrhage at the time of delivery is lessened and the tendency to secondary hemorrhage is not increased.

The relaxation of the muscles of the perineum is complete and lacerations of these parts are reduced to a minimum.

When used during labor, low lumbar injections do not materially influence uterine contractions. However, labor is retarded because of the paralysis of the lower abdominal muscles. Therefore, spinal anesthesia is indicated in complicated obstetrics, but as yet there is no indication for its use in lessening the pain of a normal delivery.

Doctor Polak, discussing eclampsia in a recent

article, states that inhalation anesthesia is a great contributor to the increased mortality and whether delivery is to be made by Cesarean or instrumental aid, spinal anesthesia is the only form to use and by using this the mortality is decreased 31% over the mortality of inhalation anesthesia.

Lungs.—As this anesthetic has no effect on the lungs it is indicated in all those patients suffering from active infection of the respiratory tract, recent or latent pulmonary tuberculosis and asthma.

Diabetes.—The use of general anesthetics increases the blood sugar. Very little increase is noted after spinal anesthesia.

Cardio-Vascular System.—Patients with valvular heart disease as well as those with high blood pressure act favorably under this form of anesthesia.

Fractures.—Open or closed reduction of fractures is facilitated by the complete muscular relaxation of spinal anesthesia.

Age.—Spinal anesthesia may be used in patients of all ages.

CONTRAINDICATIONS

Spinal anesthesia, because of its greater danger, should not be used where local anesthesia will suffice, or for operations of a few minutes' duration, not requiring muscular relaxation. These may be performed under gas, ethylene, or gas oxygen with greater safety to the patient.

It should not be induced if there is dangerous hypotension from shock or hemorrhage. In these conditions the blood pressure is too low to stand the further reduction which spinal anesthesia causes. With a systolic blood pressure of less than one hundred millimeters of mercury, it is considered unsafe to use this form of anesthesia.

In valvular heart disease associated with decompensation the patients do not react favorably to the drop in blood pressure and the slowing of the pulse.

In recent untreated syphilis or when this disease in any way involves the nervous system: these individuals having had a subarachnoid injection may attribute all subsequent symptoms to the spinal puncture.

FAILURES

The percentage of failures following the induction of spinal anesthesia varies greatly with different operators. That they do occur, after every step in the technique has been carefully carried out, is evident. Eliminating anatomical

defects, they are usually due to some technical error, probably the most frequent one being an imperfect puncture of the dura, the flange of the needle only partially entering it. This permits the escape of cerebrospinal fluid, but when the injection is made most of the anesthetic fluid escapes extra durally. However, in most of the failures, there is some degree of anesthesia and a satisfactory anesthesia may be obtained by giving the patient enough gas or ether to dim consciousness.

MORTALITY

In reviewing the literature of this subject, the author finds that the mortality statistics vary so widely that no reasonably accurate index can be obtained.

Higgins¹² reports two fatalities in fifteen hundred cases. Boyd and Yount¹³ six thousand two hundred and twenty-nine cases with four deaths. Rood¹⁴ eight thousand cases and four deaths. Jonnesco¹⁵ reports no deaths in a series of two thousand four hundred and thirty-six cases. Babcock divides his cases into three periods. In the first five thousand cases, ten anesthetic deaths occurred, nine patients died on the operating table and one two days after the injection. In the last two periods covering fifteen thousand patients, there was no anesthetic mortality. In these periods high spinal anesthesia was abandoned and the injection was withheld from patients in extremis.

C. C. Wells¹⁵, in a summary of twenty-eight thousand seven hundred and forty-six injections, states that the mortality from 1908 to 1914 was 1-200; from 1915 to 1917 1-16,000. This suggests that the use of the newer and less toxic drugs combined with the refinement in technique which has occurred has greatly reduced the mortality from spinal anesthesia. It is now much less than the published statistics would indicate. However, many will continue to use spinal anesthesia only in those cases in which a general anesthetic is contraindicated. Of necessity, their mortality will continue high.

CONCLUSIONS

After having induced spinal anesthesia in about five hundred cases and after close association with many more hundreds of patients who have received subarachnoid injections for the induction of anesthesia, and a review of the literature on this subject, the author has arrived at the following conclusions:

That spinal anesthesia, in its present state of

development, is a safe procedure, having a mortality rate lower than that of general anesthesia, for major operations below the diaphragm:

That it improves the prognosis in a number of operations by allowing the surgeon to safely operate on patients who would probably die from the administration of ether or chloroform;

That abdominal and pelvic surgery is facilitated by the perfect analgesia and muscular relaxation obtained by the use of this method; and,

That the absence of postoperative symptoms, such as nausea and vomiting, gaseous distention, motor restlessness and kidney and lung complications, is of great advantage to the patient.

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A PARTIAL REVIEW OF THE PRESENT STATUS OF INJURIES TO THE BRAIN AND SPINAL CORD*

J. S. TURBERVILLE, M.D.,

Century.

The automobile and the increasing prevalence of motor-driven machinery have increased the incidence of injuries tremendously, and the brain and spinal cord have their proportionate share. Every medical man today should be capable of at least rendering intelligent first aid, and be sufficiently trained in diagnosis to know where to send these unfortunates.

The boast is often made concerning the recent advance in neural surgery. It is true that authors of twenty-five years ago thought more in terms of injury to the bony framework than in those of damage to the brain and cord. There

has been practically no advance made in the surgical technique, except that brought about by the more general use of local anaesthesia, and to the use of motor-driven tools. The older authors even recognized that there were cases of injury to the brain without fractures to the skull. As for the spinal cord, what progress has been made is due largely to the use of the X-ray in diagnosis.

The greatest advance in brain surgery has come from a better knowledge of the pathology of acute injuries, and particularly as regards the part played by intracranial pressure. The conception of the latter has given the basis for surgical interference, and especially the necessity for opening the dura in any decompression operation. Till comparatively recently, the fear of sepsis and hernia of the brain prevented many from finishing what was otherwise an ideal operation.

The spectacular results often following elevation of depressed bone and removal of large epidural clots from the torn middle meningeal arteries, no doubt, were the factors that led to indiscriminate operating on all fractures. With the conception of intracranial pressure as being the chief factor in the morbidity and mortality the fracture became of much less interest, except those depressed and those causing middle meningeal hemorrhage. Massive brain injuries usually cause so much shock that these patients die before there is increased intracranial pressure sufficient for recognition. Also with the conception of intracranial pressure came an understanding of the mechanism of the symptom complex: namely, lowered pulse and respiratory rate, increased blood pressure, contracted pupils, papilledema, choked disks, and later that peculiar phenomenon, Cheyne's Stokes respiration. Clinically the sequence, high blood pressure, contracted pupils and choked disks, has been established by the use of the spinal manometer. Sharpe, all symptoms considered, even uses the intraspinal pressure as an indicator, for or against operative treatment.

Notwithstanding our better conception of the pathology, the actual application in practice is far from uniform. There is pretty general agreement as to what should be done, and the method. However, the line of demarkation between those to be conservatively handled, and those to be operated on, is very indistinct, and after all must be determined by the judgment of the individual

*Delivered before the 9th Annual Meeting of the Florida Railway Surgeons' Association, Tampa, April 2, 1928.

surgeon. There is general agreement that no operation should be done during shock, and it is useless to do it in medullary edema (decompensation). All cases of depressed fractures and middle meningeal hemorrhage should be operated on, the former to prevent cortical irritation and later troublesome sequelæ, the latter, to prevent death.

Damage to the spinal cord, or at least the symptoms indicating it, has not received any very definite advice as to the proper management. There is general agreement that no operation should be done where there is severance of the cord, but none have been able to give any positive indication of this condition. All are uniform in the view that cord pressure for any length of time results in permanent damage. It is thought by most that the cauda will regenerate after pressure over prolonged periods of time, when decompressed.

Dr. Charles E. Dowman in a personal communication says, "We rely entirely upon the presence of actual pressure on the spinal cord as an indication for laminectomy. This can be determined by the application of jugular compression, with a simple tube manometer attached to the needle used for lumbar puncture. If there is no rise in the column of fluid on jugular compression there is an obstruction to the canal. We feel that laminectomy is indicated for the relief of pressure regardless of the neurological findings."

The method just described is no doubt the best possible guide for operative procedure. I have always thought that, in the presence of distinct indication of cord pressure, the treatment pursued was largely the result of personal courage. The man who has his reputation most in mind will hesitate and perhaps use the argument of blood clot pressure; the man who is most interested in giving the patient a chance will operate. The patient who dies as the result of a surgical operation for the relief of a damaged cord is indeed fortunate, for there is nothing more harrowing than the life of these hopeless cripples. Inasmuch as there is no way of distinguishing between complete severance of the cord and tight compression, the spinal manometer indicating closure or severance of the canal, immediate operation should be the rule after giving reasonable time to combat shock.

I shall touch briefly on the outstanding features of acute and chronic brain injuries in adults, children, and the new-born.

Acute Brain Injuries in the Adult.—When we realize that one out of every three of these persons die, it is small wonder that surgeons are not keen to treat these cases. However, about 14% are in the class of massive brain injuries and die in about six hours, and as all are agreed that these should not be operated on, the mortality in those treated is about 19%. According to Sharpe 56% will not need surgery, other than tapping of the spinal canal. It can be seen from this that operative treatment is necessary in only a small number.

Dowman has a rather elaborate classification of these injuries, but by close study of them it can be seen that he and Sharpe are in close agreement concerning those requiring decompressive operations. Both advise operations on depressed fractures, and those producing middle meningeal hemorrhage. Both operate in the presence of evidence of increasing intracranial pressure not relieved by conservative management, and before the stage of medullary decompensation. Neither operate in the presence of shock.

In my search of the recent literature, which by no means is exhaustive, I have found none who makes himself so clear on what he regards as the indication for operative interference, as Sharpe. He advises operative treatment in those cases in whom rest, dehydration, and repeated spinal puncture drainage do not cause an abatement of the symptoms, and in whom papilledema is making its appearance, and the spinal mercury manometer registers twice the normal, that is 14 to 16 mm. of hg. Most of us are incapable of doing the ophthalmoscopic examination, but any of us can use the spinal manometer.

Dr. Walter Dandy of Baltimore read a paper before the Southern States Association of Railway Surgeons last November, in which he disagreed with the practice of spinal puncture, and the dehydration methods. His indication for operation is a continuance and progress of symptoms of intracranial pressure. His is almost a "let alone" policy other than the combating of shock, and other measures for the comfort of the patient. His article has not been published. I am, therefore, giving this from memory, and if I am not correct I stand ready to be corrected.

The operation of choice is subtemporal decompression. Operation is necessary in about 30% of those sustaining brain injuries.

Chronic Brain Injuries of Adults.—It is well known that many people who have had head in-

injuries are not normal afterwards. There are all sorts of complaints, headache, dizziness, depression, irritability, change of personality, and neurosis, total about 67%. Many of these have been found to have chronic intracranial pressure as demonstrated by the ophthalmoscope and spinal manometer. Perhaps many of these can be prevented by better handling during the acute stage, keeping the pressure down, prolonged rest in bed, and earlier operation. No doubt a few can be benefited by late treatment. It has been found by operations and autopsy that some of these have the wet edematous brain, the result of interference with proper circulation about the brain-cortex, scarring, organized blood clots, and traumatic cysts.

Acute Brain Injuries in Children are managed in the same way as in adults. However, operation is necessary in only about 16%. This is thought to be due to the less frequent occurrence of cerebral edema.

Chronic Brain Injuries in Children.—It has been found that the younger the child sustaining brain injury, the more likely he will have symptoms of spastic paralysis, and mental retardation, not unlike those occurring from birth injuries. This is particularly true in those injured before three years of age. The use of thyroid and thymus therapy has been advised in some of these cases on account of its influence in retarding the secretion of cerebrospinal fluid. However, most of them are forced to decompressive operations, if there is any hope of relief, and this at best can only be partial. Operation in these cases has revealed chronic cerebral edema in many.

Acute Brain Injuries of the New-Born.—Sharpe has done considerable work along this line, and finds a great number of infants in the first days of life to have an increased intraspinal pressure, and the fluid often blood-tinged. There are varying symptoms presented, namely, drowsiness, inability to nurse, difficulty in taking food, muscular twitching, particularly about the orbit, and actual convulsions. The treatment is the same as that of the adults.

Chronic Brain Injuries in Children Resulting from Intracranial Hemorrhage at Birth.—These furnish most of the cases of Littles' Disease, cerebral spastic paralysis. This author in 1843 in his monograph on "The Deformities of the Human Frame" gave it as his opinion that most of these cases were due to lack of development and agenesis of the cerebral cortex, or from a

former meningitis, but stated that he had seen a few that were apparently due to difficult labor. In his second monograph in 1862, "The Influence of Abnormal Parturition, Difficult Labors, etc., upon the Mental and Physical Condition of the Child," he stated that in his belief 75% are the result of intracranial hemorrhage at birth. This was overlooked till recently, only his former opinion prevailing.

The subject matter here follows largely the arrangement of Sharpe in his writings.

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AN INTERESTING CASE OF FRACTURE OF THE LEG TREATED WITH IMPROVED SPLINT WITH GOOD RESULT*

J. M. ANDERSON, M.D.,

Surgeon for Southern Railway,
Lake City.

I am reporting a case of compound, comminuted, multiple fracture of the right leg. On January 20, 1928, W. B. M., a white male, automobile mechanic, age 50 years, was run over by a wrecker and carried through a brick wall, frac-

turing the middle third and lower end of right tibia, with abrasion of about one-fourth of anterior surface of the leg. The fracture was dressed with wet Daiken solution, and wooden splints applied. The splints, which were used for protection only, were held in place by cotton packed on both sides with adhesive plaster at both knee and foot for extension. Wet dressings of Daiken solution were applied for three weeks until the abrasion healed, then wet saline dressings were used for three weeks longer.

The main splint was made of half-inch iron pipe with spiral springs at each end. The cloth was attached with safety pins to hold the leg. This splint arrangement was attached to a pulley with a rope and the rope fastened to the head of the bed for the convenience and use of the patient. In this way, he was able to dress his own leg, change his position, use pan, etc.

The patient is now walking on crutches, and using his leg to some extent. The leg is in perfect position, with no shortening or deformity. I have seen no other splint like this. I do not know if there ever was a splint like this in use.

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KNOW YOUR CANDIDATE

Medical men are ever reluctant to indulge in active political participations. This seems good and well at most times. However, there are occasions when candidates are definitely for or against those things that directly concern and without which our medical science cannot exist. The June election in our state presents an opportunity for medical men to vote for candidates who are for or against certain issues that concern organized medicine.

The teaching of the scientific theories of evolution in our higher institutions of learning is as necessary as the teaching of the so-called germ theory. The abolition of teaching certain phases of evolution is a certain retrogression in our educational system. Are we going to permit state officers to be elected who are determined to suppress the teaching of evolutionary theories in our higher educational institutions?

Another point well worth considering is one that has previously been mentioned in our papers.

namely, that of the erection and operation of a state tuberculosis hospital for which the legislature has provided funds. The present state administration has for some unknown reason not made any endeavor to hasten the work. It seems that many other state projects have been crowded to completion while the erecting of an institution for the care of the suffering tuberculosis must wait.

Let us determine what our various candidates expect to do about these projects before casting our ballots in the coming election. Know how your candidate stands on these various medical questions before voting.

RECENT MEDICAL DISCOVERIES

Twenty-two additions to medical knowledge which may be expected to have important bearings upon future practice are described by George E. Coleman of the William Hooper Foundation for Medical Research, in a pamphlet just published by the American Association for Medical Progress.

One of the most picturesque discoveries noted in "Some Medical Discoveries of 1927" is the successful treatment of paresis by inoculating the patient with malaria. The treatment is based on the fact that the paresis parasite is highly sensitive to heat. Malaria induces high fever; hence the fever can be used to destroy the paresis germ, and then the malaria can be cured by quinine. For this discovery Prof. Julius Wagner-Jauregg, of Vienna, was awarded the 1927 Nobel prize.

Dr. J. J. Abel, of John Hopkins University, produced what appears to be a crystalline form of insulin, a deficiency of which substance is the cause of diabetes. The discovery of "myrtillin," a drug derived from a Siamese plant, for the treatment of diabetes was announced by Dr. F. M. Allen, of Morristown, N. J. Dr. K. E. Birkhaug, of Rochester, developed a curative antitoxin for erysipelas.

Several dietary discoveries were announced, the chief of which is the use of liver to cure pernicious anemia, as demonstrated by Drs. Minot

and Murphy of Harvard. Prof. L. J. Meyer, of the University of Berlin, demonstrated the presence of vitamin C in milk; the absence of this vitamin from the diet brings on scurvy. Research workers in Massachusetts General Hospital found a special reduced diet of value in treating epileptic children. Dr. A. F. Hess of New York found dried milk treated with ultra-violet light useful in preventing rickets in babies.

In the University of Chicago Dr. W. H. Taliaferro reported progress in developing a serum for fighting the African sleeping sickness, and Dr. Florence B. Seibert made important discoveries about the chemical nature of tuberculin. Scientists in Berlin discovered changes in animal tissue due to the action of arsenic, which may have an important bearing on the problem of cancer. The Germans also are experimenting with an improved antiseptic, "avertin."

PROCEEDINGS OF THE NINTH ANNUAL MEETING OF THE FLORIDA RAILWAY SURGEONS' ASSOCIATION

The Ninth Annual Meeting of the Florida Railway Surgeons' Association was held at Tampa in the Music Room of the Tampa Bay Hotel, April 2, 1928.

The meeting called to order at 10 a. m. by L. S. Oppenheimer, M. D., chairman of Committee on Arrangements. After the invocation by Rabbi R. B. Hershon, an address of welcome was delivered by W. P. Adamson, M.D., of Tampa and the response was by J. H. Pierpont, M.D., of Pensacola.

The presidential address by J. S. Turberville, M.D., of Century entitled "A Partial Review of the Present Status of Injuries to the Brain and Spinal Cord," was delivered at this time.

The president assumed the chair and 47 new members were elected, bringing the membership up to 197, an especially good showing, since there are only a few over 200 surgeons of railways in the state.

(Continued on page 584)

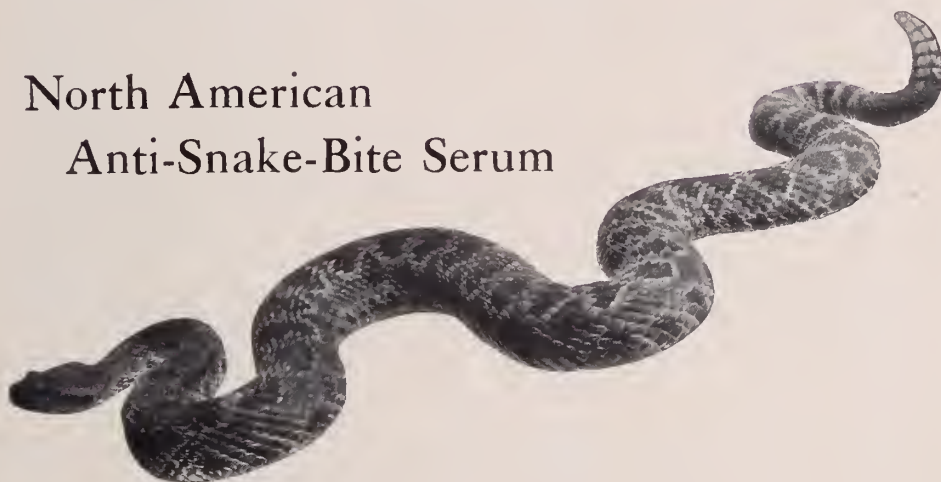
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Resolutions of sympathy and friendship for C. B. McKinnon, M.D., of Marianna, who has been critically ill for a long time, were passed.

It was moved by J. H. Pittman, M.D., of West Palm Beach, and carried, that any member more than three years in arrears in dues be dropped from the membership roster after due notice, but that he has the right, and is urged, to pay up and reinstate himself at any time.

Papers read at the scientific session consisted of the following:

"Railway Fractures" (illustrated) by Joseph Halton, M.D., Sarasota.

"An Interesting Case of Fracture of the Leg Treated with Improvised Splint with Good Results," by L. M. Anderson, M.D., Lake City.

"Spinal Anaesthesia," by Wm. N. Parkinson, M.D., Chief Surgeon, F. E. C. Railway, St. Augustine.

The election of officers resulted as follows:

President, L. M. Anderson, M.D., Lake City.

Vice-President, J. M. Dell, M.D., Gainesville.

Secretary-Treasurer, E. W. Warren, M.D., Palatka (elected at St. Petersburg meeting for four-year term).

The following committees have been appointed by President Anderson:

SCIENTIFIC COMMITTEE

H. D. VAN SCHAIK, M.D., *Chairman*..... Jacksonville
C. W. SHACKELFORD, M.D..... W. Palm Beach
H. D. CLARK, M.D. Ft. Pierce

EXECUTIVE COMMITTEE

G. H. EDWARDS, M.D., *Chairman*..... Orlando
J. C. DICKINSON, M.D..... Tampa
J. N. TOLAR, M.D..... Sanford

LEGISLATIVE COMMITTEE

C. D. CHRIST, M.D., *Chairman*..... Orlando
A. C. WALKUP, M.D..... St. Augustine
J. C. KNIGHT, M.D..... Plant City
H. E. PALMER, M.D..... Tallahassee
J. S. TURBERVILLE, M.D..... Century

NECROLOGY COMMITTEE

L. S. OPPENHEIMER, M.D., *Chairman*..... Tampa
H. A. LEAVITT, M.D..... Miami
G. C. TILLMAN, M.D..... Gainesville

ARRANGEMENTS COMMITTEE

WM. N. PARKINSON, M.D., *Chairman*, St. Augustine, together with all other surgeons in St. Johns County.

Next meeting will be held at St. Augustine on the day preceding that of the Florida Medical Association. This was conceded to be in many ways the best meeting ever held by the Florida Railway Surgeons' Association.

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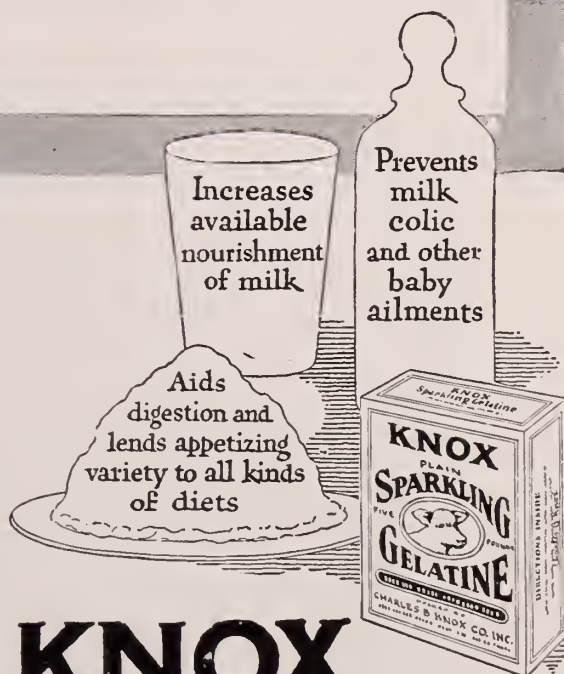
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STATE NEWS ITEMS.

The Florida Department of the American Legion, at its 1928 annual conference, voted unanimously to undertake a survey or census of every crippled person and blind person within the state. They realize that in order to do this they must enlist the aid of every civic and welfare organization possible. Those engaged in health work come in contact with a large percentage of our disabled population. You are urgently requested to report the name and address of every crippled person whom you know, to the nearest Legion Post Commander. Your assistance will materially help the Legion in this worthy undertaking. It is the wish of the State Department of the American Legion to foster a movement which will eventually result in adequate provision for treatment and rehabilitation for every disabled person through the state.

For detailed information write to the State Child Welfare Committee of the American Legion of Florida: Judge W. S. Criswell, Chairman, 101 Law Exchange Building, Jacksonville, Florida.

* * *

The Suwannee River Medical Society met in Madison Friday evening, April 13, 1928. Dr. T. S. Anderson of Live Oak, the president, presided over the meeting. Drs. George O. Davis and D. H. Yates read interesting papers on "Hemorrhagic Malarial Fever" and "High Blood Pressure." The papers brought about a general discussion. It was set forth that hemorrhagic malarial fever was almost a disease of the past with improved sanitation and mosquito control, and that the climate of the State of Florida was unsurpassed for people suffering with high blood pressure.

Drs. L. M. Anderson and R. B. Harkness of Lake City reported some of the things of interest that occurred at the State meeting in Tampa. The society adjourned to meet in Live Oak on May 11, 1928.

The doctors present were: T. H. Bates, R. B. Harkness, P. C. Farnell, L. M. Anderson, Herbert Caldwell, J. D. Gable, J. H. Dyer and L. J. Arnold of Lake City; T. S. Anderson and H. M. Strickland of Live Oak; Eustace Long, George O. Davis, A. L. Blalock, D. H. Yates and B. F. Hamrick of Madison; J. C. Ellis and R. J. Green

(Continued on page 588)

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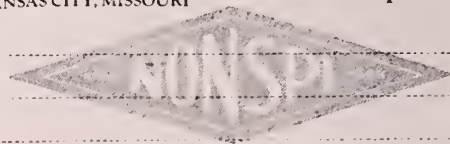
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of Perry; R. E. Dicks of Dowling Park; J. P. Kinsey of Pinetta, and J. R. Bruce of Jasper.

* * *

Dr. Marshall Taylor, Jacksonville, has just returned from Washington, D. C., where he attended the Fiftieth Annual Meeting of the American Laryngological Association. Dr. Taylor this year was elected a member of the American Otological Association.

* * *

During the month of April, the following program was presented by the Pinellas County Medical Society:

"Medical Ethics," Dr. H. L. Putnam, St. Petersburg.

"Treatment of Superficial Malignancies," Dr. J. A. Herring, St. Petersburg.

"Bladder Tumors," Dr. G. Timberlake, St. Petersburg.

"Cardio-spasm," Dr. W. G. Post, St. Petersburg.

"Rectal Anesthesia in Obstetrics," Dr. E. A. Heibner, St. Petersburg.

* * *

The May meeting of the Duval County Medical Society was held May 1st at the new St. Vincent's Hospital by invitation of the Board of Directors of the Hospital. A gratifying increase in attendance was noted. Following the Scientific Program of the evening, refreshments were served by the Hospital.

* * *

One of the features of the opening of the new St. Vincent's Hospital, Jacksonville, has been the organization of the Ladies' Auxiliary. The Auxiliary has held two meetings to perfect the organization and they hope to have a thousand members. The plan is to hold monthly meetings on the first Tuesday morning of each month, and they have selected as one of their first tasks the beautification of the Hospital grounds.

Officers elected for the Auxiliary are as follows: Honorary President, Sister Mary Louise; President, Mrs. F. J. Waas; Vice-President, Mrs. J. K. McIver; Secretary, Mrs. Vincent Armstrong; Treasurer, Mrs. Frank Adams.

* * *

Dr. Kenneth Morris, Jacksonville, is taking post-graduate work in surgery in the northern centers. At present, he is pursuing a six months' course at the University of Pennsylvania.

(Continued on page 590)

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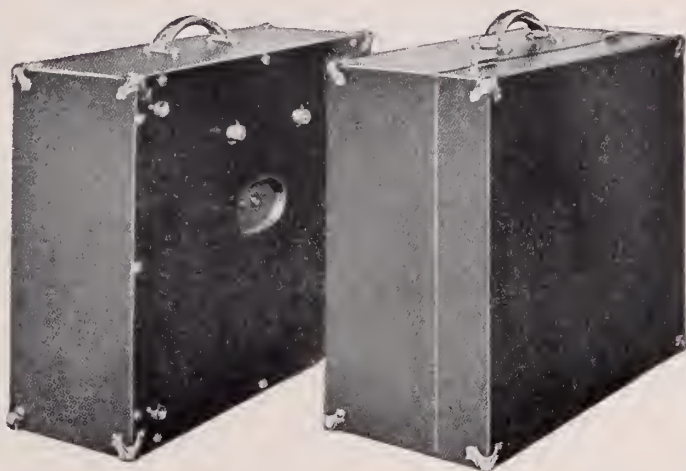
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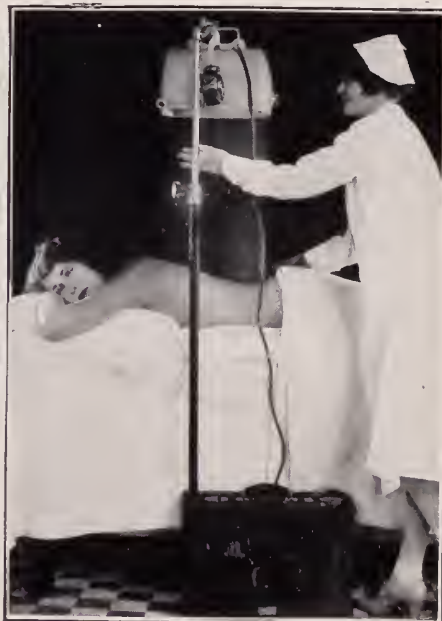
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We take our hats off to the members of the Florida Medical Association from Arcadia. They attended the Tampa meeting 100% strong.

* * *

Dr. F. S. Jennings of St. Petersburg has recently gone to Dryden, New York, where he will spend the summer, returning to St. Petersburg about October 1st.

* * *

Dr. J. M. Hoffman of Pensacola recently spent two weeks in New Orleans.

* * *

The new St. Vincent's Hospital of Jacksonville, costing approximately \$1,000,000.00, was opened to the public April 12th. During the opening day, several thousand visitors were shown through this modern institution. Several days previous to the opening the patients were moved from the old hospital to the new.

* * *

The Good Samaritan and the Pine Ridge hospitals of Palm Beach were recently approved by the American Medical Association.

* * *

The regular monthly meeting of the Columbia County Medical Society was held April 2nd at the Blanche Hotel in Lake City. The Society passed a resolution commending the city commission for their action in having a preliminary survey made for the extension and improvement of sanitary sewerage system for Lake City. Dr. L. M. Anderson read a paper entitled "Cooperation and Coordination of the Medical Society with Local, State and Federal Public Health Bodies."

* * *

The following hospitals in Jacksonville have been accredited by the American Medical Association: St. Luke's, St. Vincent's, Duval County, Riverside, Rollins Hospital of Obstetrics, and Brewster's, the latter being an institution for negroes.

* * *

Mrs. W. Lassiter, past president of the Woman's Auxiliary of the Florida Medical Association, recently visited Tampa and assisted in organizing a local chapter for Hillsboro County. It is hoped that the Hillsboro chapter will become a very active one as there is much good work that they can accomplish in their county.

(Continued on page 592)

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The many friends of Dr. W. McL. Shaw of Jacksonville will regret to learn of the death of his father, W. F. Shaw, at the family home in Sumter, South Carolina, April 28th. Mr. Shaw is survived by his widow and two sons, W. F. Shaw, Jr., and Dr. W. McL. Shaw of Jacksonville.

* * *

WANTED—We have several well-trained practical laboratory technicians with additional training in physiotherapy graduating from our school of public health May 15; physicians, hospitals, clinics, and health departments desiring such service can secure it by writing immediately. Address, Dr. L. H. South, Director Bureau Bacteriology, Kentucky State Board of Health, 532 West Main Street, Louisville, Ky.

* * *

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

of THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., published monthly at Jacksonville, Florida, for April 1, 1928.

STATE OF FLORIDA, } ss.
COUNTY OF DUVAL, }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Shaler Richardson, M.D., who, having been duly sworn according to law, deposes and says that he is the editor of the JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Publisher, Florida Medical Association, Inc. Post office address, Box 81, Jacksonville, Fla.

Editor, Shaler Richardson, M.D. Post office address Box 81, Jacksonville, Fla.

Managing Editor, None.

Business Manager, Stewart G. Thompson, D.P.H. Post office address, Box 81, Jacksonville, Fla.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent or more of the total amount of stock should be given.) A corporation—not for profit.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

FLORIDA MEDICAL ASSOCIATION, INC.,

By Shaler Richardson,

Editor.

Sworn to and subscribed before me this 17th day of April, 1928.

S. G. Thompson,

(SEAL)

Notary Public State of Florida at Large.

(My commission expires April 9, 1932.)

Form 3526.—Ed. 1922.

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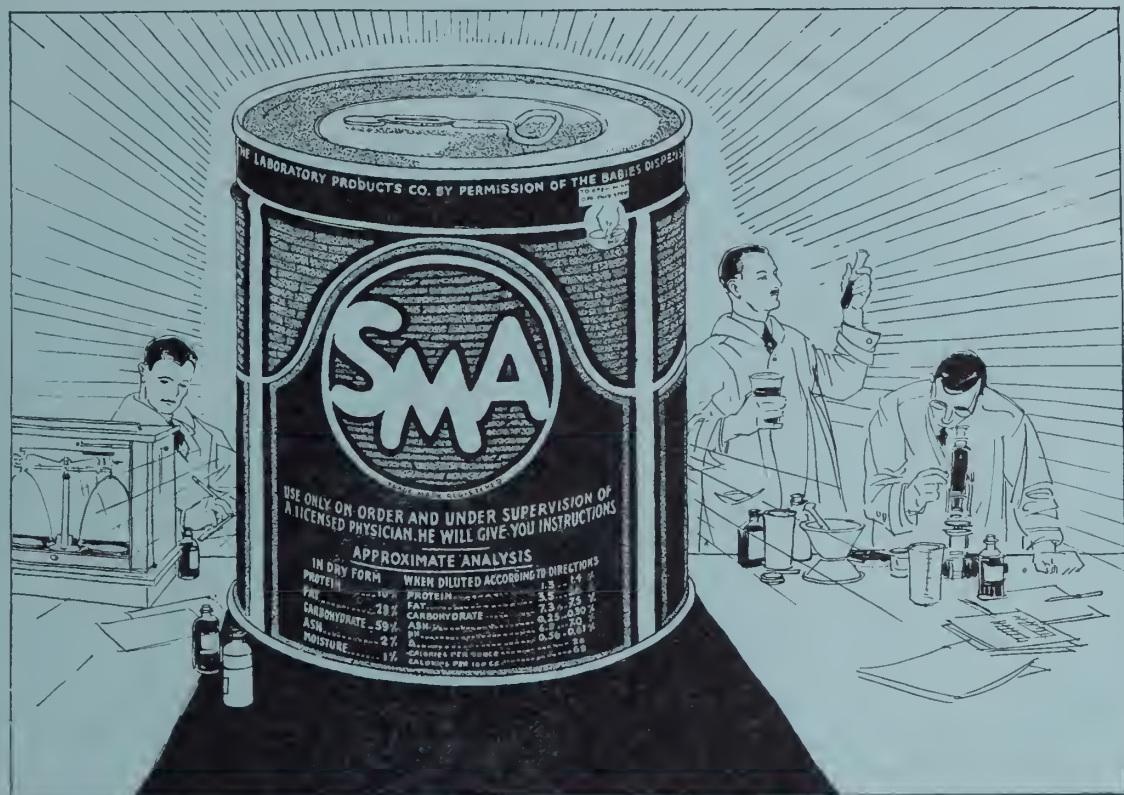
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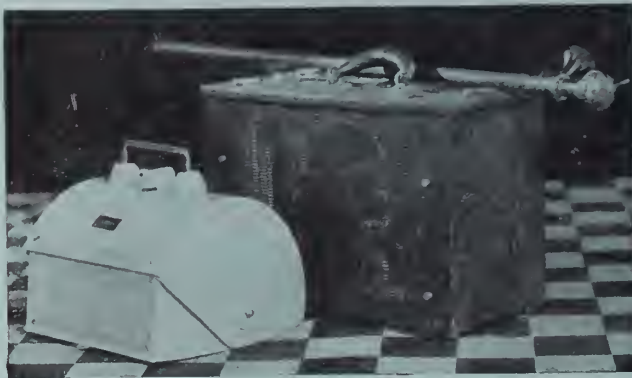
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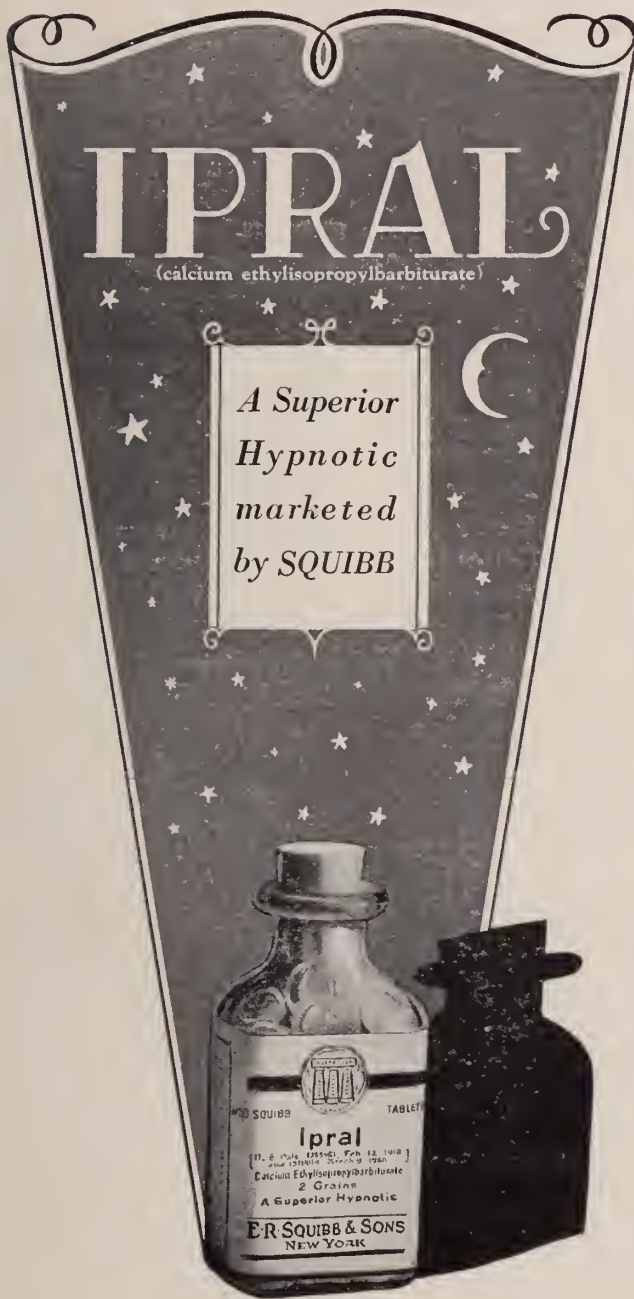
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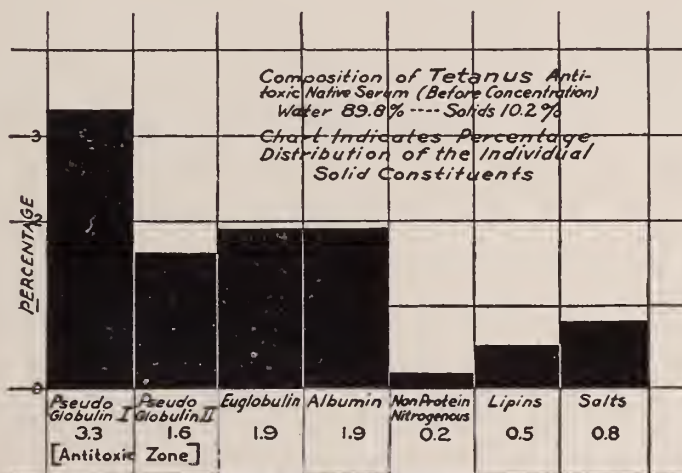
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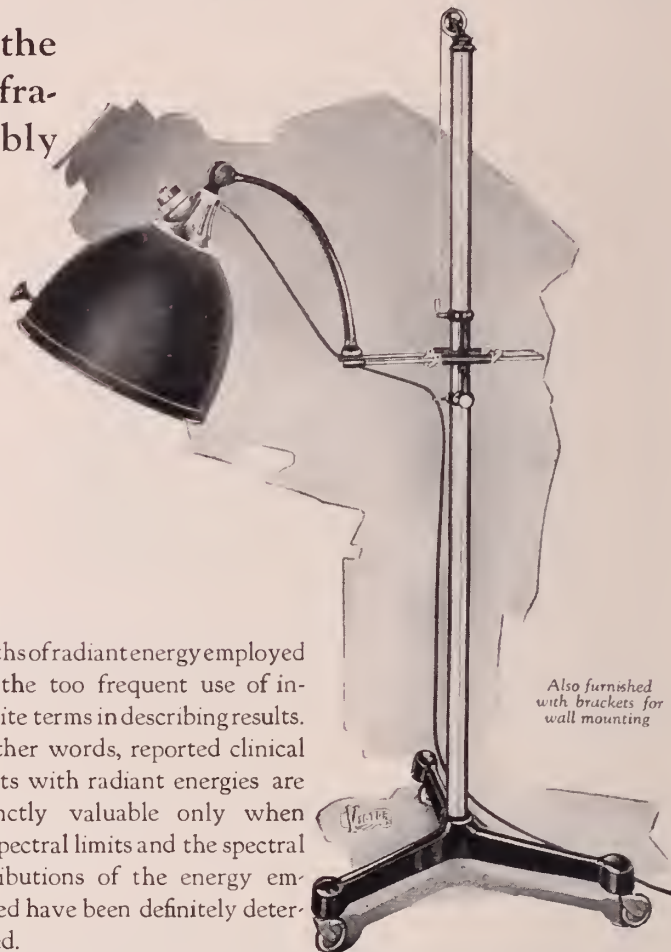
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FOREIGN BODIES IN THE URINARY BLADDER*

GIDEON TIMBERLAKE, M.D.
St. Petersburg.

It is not my purpose to present endless bibliographies, minute pathology and surgical monstrosities but, rather, an effort to direct attention to a class of work which actually accomplishes its purpose and avoids frank surgery as both means of diagnosis and relief. It gives the patients, thusly, full benefit of conservative processes which will, of necessity, keep their minds and bodies in better order.

As the caption of this subject indicates, we are dealing with foreign bodies in the urinary bladder that have either had their formation and birth into the bladder from the upper urinary tract, from a complete extirpation or those that have their origin in the bladder per se. After all, insofar as the general practitioner and patient are concerned, it is diagnosis and relief from distress by the simplest, most facile and expedient means. The clinician of experience very quickly directs the measures of the specialist who seeks to reduce any outstanding complexity to a simplicity and, better, to keep it as such. The methods at hand nowadays, leading to concrete conclusions, have been rapidly coming to the fore in the last two decades and it may be assured that no specialty has gained so rapidly and securely as that of urology. That this subject is generously prostituted by untrained and self-styled specialists, there can be no question.

PATHOLOGY

The endogenous bodies are made up, for the most part, of vesical calculi. These, as stated, may have their nuclei from calculi deposited from kidneys and ureters or form right in the bladder by accretions deposited upon foreign matter such as pus, blood, tissue, bacteria and particles introduced from without. Undeniably, we find most vesical calculi in the older males suffering from vesical orifice obstruction, whether prostatic, vesical neck contractures, median bars, dermoids or those passive bladders resulting from lesions in the central nervous system. At this juncture, attention is directed to the experienced

observation of calculi forming about bladder tumor tissue treated with radium. The explanation of this is not at hand, none the less an entity. Of the exogenous types, we have to deal with foreign bodies passed into the urinary bladder from gunshot, projectiles, clothing and bone. In some cases accidental ingestion by mouth. Those introduced by the specialist or other physician in effort to relieve retentions, dilate strictures or breakage of instruments of varying quality. Yet another set are those introduced by females—even males, in some instances—who are seeking the state of divine eroticism by these nefarious processes of stimulation. In all events, their removal, after diagnosis, is the detail in order.

SYMPTOMATOLOGY

As foreign bodies, the symptom complex presents itself as urgency, frequency, pain, dribbling, blood, retention—either relative or absolute. Terminal pain due to the bladder contracting down upon a calculus of size with ragged outline. The general symptoms consequent upon such condition are those of chills, fevers, sweats and general lassitude. There are exceptions, however. We have seen cases of vesical calculi giving almost no symptoms, either of a subjective or objective type, until they have grown apace and have only caused disturbance after there has been intensive physical exercise. There are calculi incarcerated in diverticula that attract attention of the host very late. The state of quiescence seems responsible. This is nature's means of filling a hole and, apparently, a very wise one.

DIAGNOSIS

The diagnostic methods are those of the clinician, stone searchers, X-rays, cystoscopies, cystograms, and in women palpation through vagina is sometimes employed. Of all of them, the cystoscope, in proper hands, is the method of choice for the reason that it notes the number, size, quality and location of the offenders. In such case it is plain that such accurate measures will, to a great extent, indicate the methods of approach and attack.

THERAPY

The open or cutting operation, by cystostomies, is always available in event of failure of

*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

the endovesical methods. Opening neurologic bladders for removal of foreign bodies is a surgical tragedy. While I have enjoyed employment of the lithotrite for years, it appears to have almost become a lost art. In my earlier career in the line of urology we used the Bigelow lithotrite along with the evacuator, an added instrument for forcing fluid into bladder and rapidly withdrawing it, sort of suction, in order to gather up the sand and smaller particles following the crushing. Thanks to Doctor Hugh Young, who has supplemented the lithotrite by invention of a cystoscopic rongeur, I have completely abandoned use of the evacuator. In this case, after the crushings, the patient is allowed to void the sand and smaller particles and requested to be up and about as much and as soon as possible. Later, the cystoscope is employed and surveys made. If this shows the necessity for crushing, this is accomplished, and if the size is such as can be taken care of by the rongeur, we hasten to remove such particles as are left. Where there are other foreign bodies than stone, the cystoscopic rongeur suffices in most instances. Pieces of candle, paraffin or such matter in males, calls for solvents. In females, the direct Kelly cystoscope and alligator forceps are all that are needed. Diverticulated calculi are excepted, as are those calculi hugging closely behind prostatic overhanging lobes. In these cases the open operations are those of choice, at which time the diverticulæ are taken care of or the others prostatectomized. Lithilopaxies in the females are decidedly more difficult than in the male—this due to lack of sound fulcrumage. In event calculus in female is too large to be delivered by alligator forceps or crushed, the open cystostomy or vaginasection are the operations indicated. Disintegration of calculi by electric current or dissolving them by certain salts and mineral waters, is fatuous and taboo. Anesthetics of choice are morphine, caudal, penis base block and urethral.

CONTRAINDICATIONS

These are acute urethritides, whether anterior or complete; acute prostatitis, urethral or prostatic strictures; enlarged intravesical prostatic lobes, acute cystitis and contracted bladder. Contracted bladder must always be considered as specifically against stone crushing. The greatest contraindication is that of attempt by the unorientated. This creature should, first, determine the indications for lithilopaxy; see it accomplished by one who knows; participate in its

completion; undertake it under supervision and then accomplish it, independently.

The greatest danger is that of rupture of the bladder with hemorrhage or urinary extravasation. In event of either, the bladder should be opened and properly taken care of. In arteriosclerotic cases, hemorrhage should be kept well in mind for, however slight the trauma, considerable hemorrhage is liable to accrue.

In event particles of stone should find their way into urethra and become lodged, the easiest means of relief is the employment of a large blunt-nosed sound and pushing it back into the bladder. On the other hand, they can be removed through endoscope with aid of the alligator forceps.

CASE REPORTS

1. Adult male in University Hospital of Baltimore—having filiform stricture at the bulbomembranous junction. Tunnel sound was used over whalebone filiform and, through arrogant pressure, was cut in twain—the distal end, about 8 c.m. in length found its way into bladder. This case was turned over to us for relief. It was only found after we had divulsed stricture to such size as would admit cystoscope, when we found it lying on the base and transversely. In order to remove it with the cystoscopic rongeur it was necessary to shift its position until the long diameter was toward us. It was then grasped and removed.

2. This is that of a patient, male, who had fallen from rigging of a boat and received many wounds. One of them resulted in a bladder hernia and he had to employ catheter for relief. He broke off a well-worn soft rubber catheter in bladder. It was diagnosed by cystoscopy after history, properly located when rongeur was introduced and the particle removed. Repair of the bladder hernia gave him return of bladder function.

3. The calculi shown are those fully formed and others in fragments after lithilopaxy and removal by rongeur. These were all office cases.

4. This deals with a No. 20 French soft rubber catheter. An admitted general surgeon, in trying to empty a prostatic abscess in a young man employed the catheter as guide. Guides, for this purpose, are never used by those familiar with the work. The perineum was attacked as though to do a prostatectomy and the geography was well disfigured. When he sought the catheter

ter, it had disappeared. It was then that he called for help. With meagre difficulty the cystoscopic rongeur was introduced through urethra and, after cleansing the bladder of much blood, the catheter was seen lying curled up on the bladder floor. An effort was made to grasp it by either end and this denied, it was grasped by its belly and withdrawn without further ado.

CONCLUSIONS

1. Innumerable cases have been saved the cutting operations by proper employment of lithotrite and cystoscopic rongeur.

2. There is ample cause to convince us that, if cause for vesical calculus formation is not removed, the tendency for recurrence is outstanding. Therefore, when cystostomies are done and patients only partially prostatectomized the suprapubic wound remains open—a common and distressing spectacle.

3. Because of the facility with which diagnosis and relief is to be had after the methods mentioned—all being office procedures, it presents itself as the method of choice.

4. The very fact of having patients afield of hospitals, thereby preventing the depression psychoses, which so often accrue, they most surely fare better in their homes.

5. Having patients out of bed, especially the older ones, should be rated of highest importance.

DISCUSSION

Dr. E. Clay Shaw, Miami:

Lithopaxy is one of the most dramatic operations that we have in genito-urinary surgery, but as Dr. Timberlake has stated, it is associated with danger. I believe that its indications are relatively rare. The majority of bladder calculi cases have an associated urethral obstruction—usually prostatic hypertrophy. Removal of the stone without relieving the obstruction is futile. Removal of the calculus and relief of the obstruction can usually be accomplished at the same operation. There are cases of contracture of the vesical orifice and median bar formation that can be relieved by the punch operation or some of its modifications, and when the stone can be removed by lithopaxy, an open operation may be avoided. Such a combination, it seems to me, offers the most definite indication for lithopaxy. Of course, in the relatively rare cases of bladder calculi without lower urinary obstruction, the lithotrite is invaluable. With

stones the size of a hen's egg or larger, lithopaxy is usually contraindicated; the danger from the trauma of lithopaxy is greater than the disadvantages of suprapubic lithotomy. Dr. Timberlake's note of warning regarding the dangers of a lithotrite in the hands of the inexperienced is justified. While the atonic bladder of the cadaver is not exactly comparable to the living subject, a few experiments upon the former will often prove useful.

Calculi quickly form about foreign bodies in the bladder and may present difficult puzzles for the cystoscopist. I saw a very unusual calculus in the collection of Dr. Walter Scott of Birmingham. The stone had the size and shape of a sausage and had formed about a hickory splinter that had been lodged in the bladder 20 years before, when the patient fell on a broken pick handle. Due to the fact that the splinter had penetrated both walls, the calculus was suspended in the vault of the bladder and did not rest upon the trigone, thereby causing no symptoms until it had grown quite large. The hickory wood enclosed within the stone was in a remarkable state of preservation.

I would like to describe briefly a remarkable case of foreign body in the bladder that came under my observation a few years ago. The patient was a young healthy-appearing woman, brought in by her husband with the story that she had been passing from her bladder two to five stones a week for several months. On cystoscopic examination, two bodies about the size of a buckshot were seen in the bladder and were removed with the cystoscopic rongeur forceps. These objects resembled oxalate calculi and were at first taken to be such. X-rays of the upper urinary tract did not show any shadows that might be taken for calculi. After two weeks the patient was brought back with story that four more such objects had been passed, and on inspecting the bladder with the cystoscope, we were amazed to see nine bodies similar to those previously obtained, ranging from crystalline white to brick red. The hoax was then apparent and after stern questioning, the patient confessed that she had obtained the pebbles from a gravel pit and with the aid of a hairpin had pushed them through the urethra into the bladder. From the detailed history, it was learned that the object was not masturbation, as was first supposed, but was a desire to obtain sympathy and attention from her busy husband.

Dr. J. Ralston Wells, Daytona Beach:

We must not forget the type of bladder findings that may be confused with calculi that is more or less unusual. The diverticulum presents a phase in which we may make a mistake—I had a case recently in which the bladder was perfectly empty, but gave symptoms of obstruction or calculi. A cystoscopic examination showed an opening into a diverticulum. X-ray showed the diverticulum and bladder to fill using about 400 c.c. of a bromide solution. We drained the bladder, but the diverticulum did not drain out. The opening being small (approximately cm. 0.5 in diameter) drained slowly, the patient absorbed enough bromide solution to give him a bromide sleep of almost twenty-four hours.

Aside from this case, a diverticulum may contain stone and is very easily overlooked; symptoms of stone are present, but without great care cystoscopic examinations may be negative. A stone in a diverticulum can be diagnosed by a cystoscope alone, if you are able to get the scope through the aperture leading into the diverticulum. These cases are not nice ones to handle, at any stage, especially in advanced age, but the idea of stone in urinary bladder must not be ruled out by cystoscopic findings in the bladder alone unless you also rule out diverticulum. I have seen two stones in bladder diverticulum.

Dr. Gideon Timberlake (closing):

Dr. Shaw refers to having practiced use of the lithotrite on cadavers. I do not hold with this for the reason that I would advise no novice to attempt to learn this procedure in inanimate or unresponsive bladders. In the cadaver we have loss of flexibility and elasticity—in the neurologic bladders, those denied, through pathology in the central nervous system, proper innervation, are equally as bad for purposes of instruction. In fact, they are worse because of immeasurable damage being done without the patient's knowledge of it. In a word, there is no specific resentment. Lithilopaxies are vastly more difficult in this type of bladder because of its atonicity.

Doctor Wells refers to his disappointment in viewing diverticulae through the cystoscope. While I can visualize no great importance of an intimate knowledge of what they may contain, I suggest that the periscope of the cystoscopic rongeur will afford at least 6 c.m. more length.

Introduction of it requires somewhat more skill than that of the ordinary cystoscope.

It has been definitely pointed out in the body of the text that the choice of cystostomy or open operation is always available. Our object has been to direct attention to the fact that we can avoid this radical side in a vast number of cases suffering from foreign bodies of the bladder.

IMPOTENCY IN YOUNG MEN—ITS TREATMENT.*

JOHN E. HALL, M.D.,
West Palm Beach.

Probably the first authentic reference we have in either profane or sacred history relative to impotency is the one appearing in the first chapter of the first Book of Kings, wherein it states: "Now King David was old and stricken in years; and they covered him with clothes, but he gat no heat. Wherefore his servants said unto him, let there be sought for my Lord, the King, a young virgin, and let her stand before the King and cherish him; and let her lie in thy bosom, that my Lord, the King, may get heat. So they sought for a fair damsel throughout all the borders of Isreal, and they found Abishag, the Shunamite, and brought her to the King. And the damsel was very fair, and she cherished the King and ministered to him; but the King knew her not."

The Bible fails to state the condition of the King's mind as a result of his impotent condition, but it is safe to assume this was the keenest disappointment that the Lord's Anointed ever experienced in his long and eventful life.

Passing from sacred to profane history, and coming down throughout the centuries to more modern times, we find it recorded about four hundred years ago that, Ponce de Leon, a rich and powerful grandee of Spain, becoming old and no longer finding favor in the eyes of the beautiful senoritas of the Royal Court of Castile, heard from sailors returning from the New World across the seas of a beautiful fountain in Florida's fair land, in whose waters an old man bathing, was immediately transformed into a youth.

This great noble of Spain desired above all things that he might regain his vanished youth, so that once again he might love and be loved,

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as he had in days gone by. Therefore, he organized and equipped an expedition and set sail to seek this wonderful fountain of youth. His quest was doomed to disappointment, for instead of finding the fabled fountain, he found death.

Before and since King David's day, men advancing in years and finding their sexual ability failing, have sought in vain for something that might restore them. This desire for restoration of youth and vigor springs eternal in the minds of men as age causes a diminution of sexual desire and a waning of ability to accomplish the act.

Any new remedy is eagerly sought for, and the price thereof is a matter of indifference, for, as said in Holy Writ: "Yea, all that a man hath, will he give for his life." Just as true as these words uttered by his Satanic Majesty relative to Job, might be added likewise, that man, as old age approaches, would give all his earthly possessions for restoration of youthful vigor.

Quacks have taken advantage of this fact for ages past, and as result of false promises held forth, have accumulated vast fortunes.

In very recent times, the hope of mankind was centered upon the implantation of glands. This, like De Leon's fountain, was a delusion and a hollow mockery, since it is a physical impossibility to quicken old blood and cause rejuvenation by the implantation of younger glandular tissue. I shall mention this type of impotence later on, but now I am going to take up this condition as applied to young men.

There are thousands of normal young men who come under this classification, and age is eliminated as factor in all such cases. What is the underlying cause for this type of impotence?

The answer is that it is psychical, and of all forms of impotence this type is the most difficult to overcome, and is directly responsible for many tragic endings.

The sexual function is of vital importance to a man, and the loss of it causes him the gravest concern. His sexual ability is a matter of pride to him, and there is nothing which is qualified to cause him greater shame and embarrassment than finding he is unable to perform the sexual act. Such a discovery overwhelms him and his mortification and shame are beyond the power of words to express. He develops a profound contempt for himself and every bit of his self-respect is shattered. When this occurs without any reason to a normal young man, what is he

to think? He is unable to ascribe any cause for it, and cannot explain to his own, or to his mate's satisfaction, the reason for such failure. She will, in all probability, either ridicule him for his lack of virility, or else become indignant and accuse him of having no desire for her. If he happens to be a young married man and this occurs with his wife, woe to him, for she naturally attributes it to the fact that he has some other woman on the outside, and no denial on his part is of any avail toward convincing her otherwise.

On the other hand, if he is a single man, and is subjected to ridicule by his partner on account of failure, it is a mortal blow to his pride, and his confidence in his sexual ability is for the time being destroyed. The next thing he does is to get himself a different partner to test out his sexual power, since he does not dare to subject himself to further ridicule by attempting it with one with whom he has already failed.

In the vast majority of instances the result is this. There is present in his subconscious mind the knowledge he has failed, therefore, history repeats itself, for, as said in Proverbs: "As a man reckoneth within himself, so is he." This is absolutely applicable here, for doubting his ability, he is unable to accomplish the act. From this time on, he is hopelessly incapable and becomes despondent and morose, for he feels he is no part of a man, and loses all interest in life. Suicide frequently follows this mental state.

What causes the first failure? There are numerous factors which may be responsible for the primary failure, and among them may be mentioned inebriation, fear of detection, repeated intervals of over-stimulation without sexual gratification. For instance, where a young man has been going with a girl for months and she keeps him in a state of sexual excitement, but always denied herself to him, and then finally yields unexpectedly.

I have in mind one such individual now; a young man, 26 years of age, a perfect specimen of manhood, of powerful physique, who declared this happened to him. When the girl did yield, he was so nervous and overexcited he was unable to perform the act. He said he had had repeated opportunities since, but had never been able to accomplish anything with her. He is sexually competent with other women, even though these women be common prostitutes, having no physical attractions for him. He has an intense desire for his sweetheart while away from her,

but when the opportunity presents itself with her, he fails utterly.

Fear of detection is probably the chief of the psychical causes of impotence. If any element of fear enters into the act, a man cannot perform.

Sexual neurasthenia as a result of gonorrhea not infrequently causes impotence in young men. In passing, I will state the specialist in no other branch of medicine is called upon to treat more male neurasthenics than is the urologist.

It is true that a pathological condition resulting from gonorrheal infection may produce true impotence, as a result of chronic inflammation of the prostate, vesicles and verumontanum. Such patients require adequate treatment of the diseased organs, if one hopes to overcome impotence due to such involvement. I believe all such conditions are amenable to treatment, and that, when the underlying cause is removed, the impotent condition automatically corrects itself.

Physicians are sometimes responsible for the production of the sexual neurasthenic, who may later on become psychically impotent. The reason for this is, the patient is informed by the physician that gonorrhea is an incurable disease, and once infected, a man never recovers. Such teaching by a physician is both pernicious and reprehensible, and is directly responsible for many men becoming hopeless neurasthenics. I have no hesitancy in stating a physician guilty of making such an assertion is, self-admittedly, incompetent to treat the disease, and the patient should, by all means, seek one more qualified to take charge of his case.

Personally, I will state as far as men are concerned, that I believe practically all of them are curable, if they receive adequate treatment, instituted for a sufficient length of time. Digressing for the moment, I will admit I am a decided pessimist as to the eradication of gonorrheal infection in women, after chronic involvement.

Syphilis, undoubtedly, causes certain changes in the nervous centers which result in permanent impotence. Such action is imperfectly understood, but we are all aware that this luetic end-result sometimes confronts us. Treatment in such condition does not offer much hope of relief.

Prostatorrhea may be held accountable for a certain number of those rendered psychically impotent. We are frequently consulted by young men who complain of losing their semen, and state as a result of this condition, their sexual

ability is impaired. Prostatorrhea is common to all men. On defecation, the faeces, if hard in character, mechanically acts as a massage, forcing the prostatic secretions out through the prostatic ducts into the deep urethra, finally appearing at the external meatus.

This discovery has a depressant effect upon some men, as they do not understand its significance, and naturally attribute it to sexual disturbance. The same thing applies to nocturnal emissions. It is surprising how much worry and mental depression is caused by this physiological action.

The frequency of nocturnal emissions depends upon the amount of semen secreted, and the resultant over-distention of the seminal vesicles. Since this amount varies in different individuals, it follows that the number of emissions varies. It is not uncommon for young men who are strong and healthy to have as many as four or five nightly emissions within a week's time. Since they do not know the reason for these nocturnal losses, it is only natural they should regard it as evidence of sexual weakness and loss of manhood. Brooding and worrying over these two normal conditions, not infrequently result in psychic impotence.

What are we to do with this psycho-neurotic type, when consulted by them for treatment of their functional disturbances?

There is no class of patients which require more tact and judgment in handling than this. Such patients are shy and reticent about confiding their troubles, even to a physician, and unless one is capable of inspiring them with trust and confidence, he will fail to get full facts as to the patient's real or imaginary troubles. Give him full time to explain all his symptoms in detail, and let him feel that he has a sympathetic listener.

Psycho-therapy, or suggestion, is the only treatment of any avail, and it is essential that one should have the full confidence of the patient in order to get results. Every patient is a law unto himself, and one has to be a good judge of human nature in order to determine what line of treatment to pursue in each individual case.

Drugs should be used, but I am convinced their chief value is due to psychic effect, rather than to their physiological action. All the aphrodisiac preparations ever compounded are worthless, unless one can influence the patient's mind, and persuade him that the drug will produce the

effect for which it is prescribed. It requires time, tact and infinite patience to deal successfully with this type of patient. One must at all times assume a cheerful mien, and be capable of reassuring them as to the ultimate outcome, when they are inclined to doubt and become despondent over their condition.

Impotence following chronic gonorrheal infection requires treatment for the pathological condition producing such a result. As stated previously, chronic seminal vesiculitis and verumontanitis are capable of bringing this about. While I do not intend going into detail as to the treatment of these conditions, I will state that many chronic cases of seminal vesicle involvement will not respond to massage, and require injection of the vasa to produce a cure. I have seen three cases of impotence due to this cause, which were entirely relieved following vasa injection.

Chronic inflammation of the verumontanum responds readily to topical applications of silver nitrate, applied directly through a posterior urethroscope. Involvement of this area causes not only impotence but also a train of nervous symptoms, or manifestations.

Before closing, I desire to revert to those who are impotent, due to advanced age, and state there is little hope to be extended them. They like Belshazzar at the feast, have seen the handwriting on the wall, but unlike the king, do not need a Daniel to interpret the meaning thereof, for each and every one of them is able to decipher for himself the message written on the plaster by that mystic hand, and each one shrinks as did that king of old, at these dread words: "Thou art weighed in the balance and art found wanting."

DISCUSSION

Dr. H. Mason Smith, Tampa:

Mr. Chairman and Gentlemen: It is very gratifying to perceive the sentiment of the urologist as revealed in this paper, and to observe that an intelligent approach is being made to the subject of sexual impotency; instead of the urologist only looking for some pathological condition in the urinary tract, he is now taking into consideration the things of psychogenic nature, or the effect of the mind and subconscious on the nervous system.

The functional side of the subject may be summarized in the words *psychic trauma* which serves very much as a physical trauma does in

the motor system; for instance, a lacerated muscle or broken bone will impair motor function, so a psychic trauma will impair nervous or physiological function.

A psychic trauma is the subconscious memory of a very painful experience and this may not necessarily be carried in the conscious memory but is retained in the unconscious mind where it strives for recognition and handicaps the physiological function of the sympathetic and automatic nervous system. It also handicaps the behavior of the individual when anything arises that is associated in his mind, even remotely, with the experience causing the trauma; there is a blocking of the stream of thought or an inhibitory influence on the physiological function.

Therefore, if there has been some unpleasant or painful experience in the sexual life of an individual, it handicaps or inhibits normal sexual function. The painful experience may have been due to fear, shock, disgust, or embarrassment.

The failure of the act, even when due to fear, causes a psychic trauma which itself is inhibitory to the subsequent act. Each approach to the sexual act, thereafter, stirs up this trauma which blocks the completion.

I recently had an occasion to be consulted by a patient who was a perfect specimen of physical manhood, whose age was only 32 years and whose medical history was absolutely negative. For 7 years he had been impotent. This impotency dated from the time he caught his fiancée in this sexual act with another man. The psychic injury was such that it caused the inhibition of the sexual function. In fact, any idea that was associated, even remotely, with that painful experience produced the symptoms of shock in this man.

Dr. Hall's paper is the most complete that I have heard on this subject and for a man who deals with so much pathology in the urinary tract, it is indeed commendable for him to make such a broad and intelligent approach to this subject.

Dr. Gideon Timberlake, St. Petersburg:

Doctor Hall's dissertation upon the subject of sexual impotence is highly interesting and important, yet there is no specific relief offered.

Human beings, most of them, owning genitals fully appreciate that they were not designed for ornamental purposes; were this so, they would have been made beautiful and lodged in some

very conspicuous place. Regardless of their unsightliness, almost each owner soon becomes cognizant of a burning opinion which they wish to establish as uncontrovertable facts—and, with some trepidity, set about to prove their conclusions with practical demonstrations. That celibacy can and does exist, there is no question. None the less, it is a weak and fatuous attempt to reverse physiologic function. In referring to celibacy, this deals, specifically with lack of cohabitation; but it does not follow, necessarily, that the seminal vesicles are not emptied voluntarily—or otherwise!

Impotentia coeundi is either relative or absolute. The causes are general and local pathology on the one hand—those of wasting types of disease or disease of the central nervous system, on the other. One of the most important is that of psychic inhibition. This promoted by fear of apprehension, disease, failure, social wreckage and what not. Frigidity of the receptor most often stimulates such indifference as will provoke many to seek collateral fields for reassurance and sexual cultivation. The normal male is polygamous by instinct, though he may be under such moral restraint as would have himself appear as being eternally monagamous. Contrawise, he is polygamous—either in fact or fancy!

Relief can only be afforded after a complete survey of each case that will lead to mutual understanding between patient and adviser. His reassurance must be had by the most easily available methods. The male's conceit, while he would not admit it, plays a highly important role in these cases. His normal reaction to being twitted for failure and disappointment will surely provoke another, should the circumstances be similar. In light of this summary, one might easily assume that yet another shall have been disappointed. Otherwise, there could be no rebuke for failure!

Dr. Roy J. Holmes, Miami:

I wish to call attention to a cause of impotency which we believe is very common in young married men. I refer to the practice of withdrawing the penis during intercourse and before the act of ejaculation. This is a very common practice. Normally, the sexual act is characterized by a gradual "working up" through a period of excitement, to the climax which is the ejaculation. During this period the blood vessels are greatly engorged and distended. The veru-montanum shares in this extreme hyperaemia. We

can imagine what happens if month after month and year after year, the parts are suddenly withdrawn before the climax and subjected to a cold bath, as is usually the case. Normally, the period following the ejaculation may be termed a gradual decline during which the parts and their blood vessels are allowed to gradually return to normal. If this period of exhaustion is interfered with, as in withdrawing, the parts do not have sufficient time to return to normal. The blood vessels and especially the area around the veru become habitually distended, which leads to chronic engorgement of the parts. This is why so many of these cases have premature ejaculations, spermatorrhea, and other evidences of sexual excitation without complete erections. Practically every case of impotentia coeundi is preceded by a period of premature ejaculations if the condition is not due to psychic influences. Applications of silver nitrate to the veru and correction of the underlying cause, which is often withdrawal or other practices of unphysiologic intercourse, is the remedy for this type of impotence.

Dr. J. E. Hall, West Palm Beach, (closing):

I have nothing further to add. I desire, however, to express my appreciation of the liberal discussion accorded my paper by the different gentlemen.

COST OF REMEDIAL DEFECTS IN OUR SCHOOL POPULATION*

M. B. HERLONG, M.D.,
Jacksonville.

What I have to say today is to my mind one of the unknown or unthought of subjects that is certainly of sufficient interest to all of us that we should go deeper into it. It was brought to my attention while serving as a member of the Board of Public Instruction. It was called to my attention that nine per cent of the children in school fail to advance each year. At first glance I thought the fault might be in the teacher or in the parents, and a part of it might be charged to the child not getting individual attention. Some of it we know is chargeable to parents allowing the children to become interested in other pleasant things—moving pictures, parties, dancing, etc., during the school term. But on second thought, I realized that the curriculum

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for each grade had been scientifically arranged to suit the age of the normal child and the child of normal intelligence. So reasoning back, I decided that there must be nine per cent of children who were not normal. And also on various times and various schools a physical survey showed very high percentage of defects.

One school in one of our largest cities showed a 60% infection of hookworm. Almost any group of children will show a 14% infection of tonsils and adenoids; and dentists tell me that more than 50% of school children need more or less dental work. Again reasoning, I know that anyone infected with hookworms or other intestinal parasites is not able to cope with the normal child in study or play and the most prominent symptom is lassitude, commonly thought to be laziness. We also know that any person suffering from infected tonsils and adenoids is not up to the normal and the absorption is liable to set up serious secondary infections as kidney, heart, rheumatism and such trouble.

And we also know that faulty decayed teeth cause numerous complications, poorly masticated food with accompanied digestive disturbances, and the absorption from teeth is only secondary to the absorptions from infected tonsils. So I have the conclusion that our 9% loss is largely due to defects; defects that can be remedied; defects that should be remedied; defects that would not be tolerated by a hunter in his dog. Yet parents are too busy or never give their children a thought.

Now, what is the cost of this nine per cent of failures? The greatest cost is to the child. First it has to go through life suffering the physical pain attendant to such defects; suffer the embarrassment of failing to advance with the boys and girls in his class, the ones he has become attached to during a year. Right there is the start of a dissatisfied child with school, and if it be a larger child he may drop out of school entirely, too much embarrassed to go in a class of smaller children. But the greatest loss to the child is the one year's deferring of the ultimate success of that child.

The cost to the public is the only means I have to appeal to the public for relief of this condition, for as a rule, the public is hardest hit when struck in the pocket. A loss of nine per cent failures means a loss of nine per cent of the cost of our schools. In Duval County the budget is \$1,800,000, and nine per cent of this

is \$162,000. The depreciation is also a legitimate charge against our schools, and 5% is a very small charge and 5% of about \$5,000,000 of school buildings and equipment adds another \$250,000. Nine per cent of this is \$22,500 chargeable to failures, making a grand total of costs for failures \$184,500 in Duval County, mostly in Jacksonville.

I asked each principal of our schools to give the names of children who failed to the school physician and nurses, and asked the physicians to make a close examination and study of each child, and the parents to co-operate with us that we might determine the defects causing these failures and at least have the defects corrected in those children who were willing.

I have corresponded with every county superintendent in the State, and I find that the lowest percentage of failures in the State is in Orange County, where they have 6%. This is explained by the fact that several years ago the United States Government sent Dr. Hiram Byrd there to make a survey of glaucoma and they found other defects and corrected them, and have kept up the work until they have only 6% of failures.

The highest percentage is in one of the poorer counties where no work is done, and their percentage is 11%. My work is not complete. I cannot say positively that the cause is defects that can be remedied even though Orange County shows what can be done. I can say that I do not believe that anywhere near 9% of our failures are due to feeble-mindedness. There is a better reason.

I know that there are a great many children who pass that have these defects, but I also know they could do even better work and find it easier if not hampered by these defects and the symptoms concomitant to them.

I received the reports of the school physicians so recently, that I ask your pardon for not having what I wanted to show. What was wrong with those that failed? The report shows that 11.2% of the children in our city schools have correctable defects, so we have not far to go to see why we have this 9% of failures.

It is a wonder we have even this small amount of failures, and it shows that in spite of this high percentage of correctable defects, all pass the work as laid out in the curriculum except 9%. This does not alter the findings as to cost.

HEALTH DEPT. MEDICAL INSPECTION OF SCHOOL CHILDREN, MEDICAL REPORT OF FAILURES:

MEDICAL DEFECTS:

Schools.	Tonsils.	Adenoids.	Teeth.	Eyes	Hookworm.	Ears.	Speech.	Enrollment.	Failures.
School No. 3.....	6	1	13	1	1	0	0	377	40
School No. 4.....	11	4	1	0	4	0	0	800	26
School No. 5.....	31	10	23	4	20	0	2	245	43
School No. 6.....	15	0	12	2	0	2	0	620	53
School No. 8.....	16	0	25	1	11	0	0	815	64
School No. 9.....	16	1	25	3	4	0	1	360	31
School No. 10.....	19	14	7	1	14	0	1	593	47
School No. 11.....	7	1	4	0	4	0	0	560	36
School No. 12.....	20	18	15	0	5	1	1	930	58
School No. 13.....	31	32	6	7	7	0	0	550	113
School No. 14.....	4	0	3	0	2	0	0	254	6
School No. 15.....	5	6	6	0	0	0	0	520	28
School No. 16.....	1	1	6	1	1	0	0	230	14
School No. 17.....	0	0	7	0	0	0	0	360	31
School No. 18.....	13	7	2	1	5	0	1	705	45
School No. 19.....	4	4	4	1	0	0	0	300	25
School No. 20.....	21	16	16	1	1	0	0	500	50
School No. 23.....	3	2	4	2	0	0	0	258	18
School No. 24.....	1	0	1	1	1	0	0	315	12
School No. 2.....	10	7	2	0	4	1	0	565	26
School No. 21.....	5	0	19	0	2	0	0	415	44

COLORED.

School No. 42.....	10	15	10	4	0	..	..	924	42
School No. 106.....	45	25	20	3	0	..	..	435	79
Cookman's	51	..	20	..	..	..	..	1060	84
School No. 103.....	19	..	10	..	..	..	..	1322	113
School No. 143.....	9	..	8	..	..	..	..	116	18
School No. 146.....	36	..	19	..	..	..	..	942	103
Stanton School	10	..	10	..	..	..	..	1300	37
Benjamin Park Sch'l	8	..	14	..	..	..	..	120	40
West Louisville	26	..	22	..	..	..	..	890	100
Davis St. School....	64	..	20	..	..	..	..	1012	167
Total White	239	124	201	26	86	4	6	10,272	810
Total Colored	278	40	133	7	0	0	0	8,121	783
Grand Total	517	164	334	33	86	4	6	18,393	1593
Percentage of defects with respect to failures	32%	10.6%	21.2%	1.9%	5.4%	.25%	.37%	8.7% of Failures	

It does show a more alarming condition among our school children. It also shows that something should be done.

The situation in the State is that the entire state budget for schools is \$95,355,464 and our State loss is \$8,571,329. Think what can be done for these children for that amount of money and the ultimate good it would do.

I know that this amount could not be taken from the school budgets, but there should be some one to do this work and a small amount should be added for a few years to overcome this loss. If any such leakage as this should occur in any other department of the State some one would go to jail.

Are we careless about our schools? Are we careless about our children? Our future men and women?

I am bringing these facts to you, asking your

co-operation in getting it before the public and ultimately before the lawmakers that an appropriation be made or the authority be given each county to put men in the field to stop this condition. I know that every county cannot afford to put a man on duty to remove all these defects, but some one should be able to get parents interested enough to have the work done themselves and a great many counties have ways and means already for those who financially are not able to have the work done.

I also wish to state that no report of this important phase of our schools is contained in the reports of our County Superintendents to our State Superintendent. I wrote him first and he could not give me this information, so I had to write to each County Superintendent, and only a few could give it to me with any degree of certainty.

DISCUSSION

Dr. A. L. Blalock, Madison:

Dr. Herlong's subject presents so many phases it is difficult to discuss logically and arrive at tenable conclusions. I presume we should consider only physical defects or those due to diseases that impair the efficiency of the pupil. Even then the cost falls on the patron, individually and not on the state as a whole.

A very fruitful cause of handicaps to school children is delinquency in attendance and there are many ailments and diseases responsible for such delinquency. It is hard to get any child to make up work that his class has passed over—the average pupil will not do it.

Now, I propose to consider this one phase of our subject by personal data in illustration.

Curry Merchant finished the fourth grade in years 1924-25. He had previously had tonsils removed and was wearing glasses but was frail and anemic, sick and complaining all the time; could not make more than 60 or 70 per cent in attendance. While under my treatment during years 1924-25 he was at school 111 days; in 1926, 129 days; 1927, 143 days. His doctor bill in 1924 was \$27. In 1925, \$18; in 1926, \$19; and 1927, \$2. He is now in the seventh grade at school and his last general average was 95 per cent. During the three years 1923-24-25, I examined his blood for malaria ten times and in every instance easily identified malaria parasites, although my clinical records all state a diagnosis of bronchitis, laryngitis, or other acute catarrhal disease. On two occasions I was quite sure I had a broncho-pneumonia to deal with. Yet in every instance I instituted intensive anti-malarial treatment and only once or twice did I have to prescribe for what I considered the complication or resultant malady.

April 25, 1925, was the first smear of blood that did not reveal active sporelating parasites. I did find crescents; so sure enough, that fall there was a return paroxysm of malaria.

As a practitioner of medicine 42 years, and a patron of our public schools 35 years, I am quite sure malaria infection is the most potent and prevalent agent in the production of handicaps to children being reared and educated. I believe syphilis comes next and tuberculosis probably third. At an enormous expense the state and philanthropists have taught the doctors how to diagnose and treat diphtheria and hookworm disease; now if they would again do something

worth while, let them teach the doctors how to make a microscopical diagnosis of malarial infection. Then an inspection of school children will indicate course to pursue. Every child that did not appear healthy and act healthy with marked vitality and appetite but appeared sallow and anemic and wore the Florida tan, should furnish a blood smear for a microscopical examination.

I am quite sure more than 75 per cent of such would reveal malarial parasites.

Now, let me give you the record made in our public school at Madison, however much I am ashamed of it. There was during last scholastic year in our graded school 371 pupils—68 failed; 38 nearly failed; and 95 made honorable passing. That means 18 1/3 per cent failed; 10 per cent nearly failed; 28 per cent passed honorably; and 44 per cent creditably passed.

Now, as to high school: There were 122 studying English—30 failed; 80 in mathematics—32 failed; 141 languages—42 failed; 86 in higher branches—12 failed. That is 27 per cent in high school failed.

Such statistics are alarming. What percentage of such failure is attributable to pupils and what to teachers?

God only knows.

Dr. E. C. Levy, Tampa:

Dr. Herlong has brought out his point most powerfully by reducing it to dollars and cents. The medical profession, however, has its responsibility, and I hope to see the day when it will be the accepted custom for physicians to take the initiative in pointing out where their services are needed, without always waiting to be called after people are ill.

When a doctor leaves a mother at the end of ten days after delivery without explaining that he is coming back a week or two later to see how mother and baby are getting on, he has not done his full duty. Doctors should overcome their false modesty and explain that every infant and young child should be regularly looked after by the family physician. The questions of general health and normal development, as well as vaccination, administration of toxin-antitoxin and the detection and correction of incipient defects should be matters for the family physician, without waiting, as is now so commonly done even with the best families, for these things to be brought out by the health authorities after the child enters school.

Dr. T. M. McDuffie, Manatee:

I don't know of anybody that gives more free service than the physician does. If you raise horses you want the best stock you can get. I have got some of the best stock of fine chickens in the country, and I have some mighty fine children, too, but whenever you undertake to ask the law-making body to legislate in favor of the health of this country you strike a snag whenever you do it. I was chairman of the county school board of my county, and for eight years I fought for this kind of legislation like a tiger. I am glad to say each year we have a little something done along that line and the doctors are called on to do more and more for nothing. The law-making authorities of this country seem to think it is the legitimate duty of the doctor to go over this country and do what he can for humanity without price; there is too much of that. I'm in favor of his doing this when it is necessary, and I have done this and am still doing it, but I am not in favor of the legislative body of our country putting live stock or anything else before the children of this nation, but they do it. I can go to Tallahassee and ask for an appropriation in the interest of cows and get it, but for humanity that is a different thing. I think sometimes it would be better if the legislature never met.

APPENDICITIS*

ALFRED MOORE, M.D.,

Kendall.

Embryology teaches us that in the early months of fetal development the cecum and a transient appendix is entirely within the cord and to the left of the median line. The cecum continues to develop and elongate, the transient appendix retrogresses and the proximal part of the cecal pouch grows, leaving the distal portion of the cecum to remain and continue as an elongated tube that is destined to become such a trouble-maker. The fetus and viscera are growing rapidly, and about the third month the intestinal coils recede into the abdominal cavity dragging the appendix. It is pulled and swung around until it has occupied several positions in its transit from the umbilical to the right iliac fossa, where it usually stops.

The peritoneum covers the viscera about the fourth month, and normally the appendix and cecum are entirely covered and freely movable, but we find many variations and types. I have

found the appendix adherent to the liver and many times have had to hunt for it when it was in a position other than normal. In one the appendix apparently was absent, but, examining further, I noticed pus escaping from a point on the ascending colon, and it proved to be the end of the appendix that had perforated and had to be dissected out of the intestinal wall. The retrocecal appendix is found more frequently than this type of buried appendix. In a patient who complains of pain, tenderness, rigidity, nausea and vomiting, rise of pulse rate and temperature, there is not any need of waiting, but get your patient to a hospital and save valuable time. A urinalysis and a blood count are essential, but we have usually made a diagnosis in acute cases from the pain and localized tenderness, and none of us are willing to delay when an appendectomy is so simple and safe, if done in time.

Preparation should be simple, no food, no purgatives, abdomen and pubes shaved, enema, hypomorphine and atropine, and the patient is ready to be taken to the operating room and there a competent anesthetist is as necessary as a competent man handling the knife.

The abdomen is effectively prepared by the ether, iodine, alcohol method. I believe when we get suppuration in a clean wound, provided, of course, our gloves, sutures and instruments were surgically sterile, it is usually due to too much handling and traumatism of the tissues, and not so much to faulty skin toilet.

I used to be partial to the muscle-splitting, gridiron operation, but it is difficult to enlarge the incision in case you should require more room in which to work, and I now prefer the right rectus incision, which is readily extended if necessary. After the appendix is found, blood vessels ligated, purse-string suture in place, the appendix is clamped, ligated, severed and touched with phenol and alcohol and inverted, leaving the raw surface covered.

The question of drainage comes up in pus cases, and when possible, I prefer to close the incision, relying on the peritoneum to take care of itself and if not abused, can take care of itself wonderfully. In case you decide to use a drain, it is a good rule not to leave it in too long, as troublesome adhesions are very apt to form.

I operated on a man within two hours after an attack that I diagnosed acute intestinal obstruction, and found a knuckle of intestine caught in adhesions. The constricting bands were severed, and hot applications brought the color back to

*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

the intestine, and the abdomen closed. He made a rapid recovery. This man had an appendectomy fifteen years before by another surgeon and drainage used, causing the firm bands.

I operated on the fourteen-year-old son of a prominent physician—the appendix had perforated and there was plenty of free pus. The appendix was amputated and drains inserted and incision closed. Drains were entirely withdrawn by the third day and the boy home in two weeks. In another week, symptoms of acute obstruction followed a hearty meal, and on reopening the abdomen, I found the intestine bound down by adhesions. After dealing with bands of adhesions, recovery was prompt.

One case in a family is not enough, and another son had an appendix to perforate and after an appendectomy, I closed the incision and had no further trouble. This case is illustrative of many similar cases that I have had.

The layer by layer closure is best, and it leaves the abdominal wall free from postoperative hernia.

A Missouri physician sent me a patient for hemorrhoidectomy. He had an aggravated case of piles, but responded nicely to operative treatment and returned home in two weeks apparently well. In about six weeks, he had an acute attack of appendicitis, but was delayed returning, having to wait for a boat to bring him, and on his arrival in practically a moribund condition from toxemia, it was apparent that he had a general, diffuse peritonitis due to a perforated appendix. A simple right iliac incision was made, and the gangrenous appendix popped up in the incision and had a fecalith protruding through the rupture near the proximal end of the appendix. It was tied off, severed and drains inserted. Opiates, caffeine, camphorated oil and salines were given, but he did not rally.

Cases similar to this impress upon us the disastrous effect of giving purgatives which he had had, and the necessity of early appendectomy, although in this case the delay was unavoidable.

The youngest patient that I have operated on for appendicitis was an infant three years of age. I have not seen many past fifty. It seems to prefer those going at high speed, although no age is entirely exempt.

In my opinion, the negro is rarely attacked with appendicitis, and this, if generally true, would be of interest in looking for the cause.

Germ infection is undoubtedly responsible for the great majority of cases of appendicitis, al-

though foreign bodies, fecaliths, traumatism, kinks, the anatomical structure with practically no collateral blood supply make it an easy mark for disease. Oral infection and cares of the teeth is the white man's burden, and appendicitis is a close runner-up. This, I believe, would incriminate the modern tooth brush as a possible cause in accounting for the great difference in the number of cases in the white and the black. The great majority of negroes do not use such a thing as a tooth brush, while we are brushing away at our teeth daily. The average tooth brush is anything but clean, and could not possibly be made surgically clean. I saw a lady ninety-three years of age, with sound teeth, having lost only three or four, and I inquired how it was that she had good teeth when most people half her age were wearing plates. She used only an althea twig brush and made a new one each time.

Mistakes can be reduced to the minimum if, when in doubt, we call in the services of the roentgenologist and the urologist. The mortality rate is far too high in appendicitis, but surgeons are not responsible. We should urge early operation and do all in our power to reduce the mortality to nil.

DISCUSSION.

Dr. Kenneth Phillips, Miami:

I am very anxious—having heard this paper read once before—to learn a few points about appendicitis. I should like to ask the general opinion regarding drainage. Is it the consensus of opinion that after the appendix is ruptured, providing it can be secured and removed without breaking down the wall, and the pus can be sucked out of the abdomen, say with a tonsil suction machine, to close that abdomen without drainage? I have seen a report recently by a man in Chicago who has reported 100 cases and advocates it very strongly.

The second point I should like to ask about is in regard to pain. As I come in contact with men who have had years of experience, especially in country practice where they probably see more appendicitis than in city practice, they tell me pain severe enough to require more than one quarter grain of morphine always makes them suspicious as to the diagnosis of appendicitis. I would appreciate very much if some of the men here would say something upon this point.

A third thing I should like to ask the men who have had particular experience among the colored race, if they find in general that the colored race, in so far as teeth and mouth are concerned,

do have a less percentage of tooth and mouth infection than the white race.

Dr. R. F. Godard, Quincy:

I do not claim to be an advocate of criterions along surgical lines, but I have had extensive experience along the lines under consideration this morning.

First, as to the point of drainage: I still consider that the old surgical proclamation—when in doubt, drain—still holds good, and that the laws of infection—the rules of infection that we have discovered up to the present time do not permit any logical thinker to conclude for one moment that by removing the free pus in the abdomen you have gotten rid of the infection; in fact, I believe the free pus in an abdomen is far less dangerous than the infected areas which do not of necessity produce free liquefaction. Regarding drainage, I should say that the earlier one may be able to remove a given drain with prudence fortified by experience, the safer your patient is and the better the after-results you may expect.

Regarding the relation of occurrence of appendicitis in the two colors, I would say I am a native born southerner, have resided in the south all my life, where the two colors were very intimately associated. I have lived in communities where there was a ratio of one to ten in favor of the whites, one to twenty, and so on, and it has been my privilege in the last few years to have resided in communities where the colored race outnumbers the white one to three and even one to six, and I do a great deal of practice—I see one of my confreres on the floor this morning—among the colored race. I want to say that with such a preponderance of colored race in our population I am convinced, without figures to justify this statement, that the occurrence of appendicitis in the colored race is one hundred per cent as compared with that among the whites. I have very little sympathy with the proposition that tooth brushes are a menace to our population. I think it is dietetic errors and defective habits of life rather than the tooth brush proposition that is or may be claimed to be responsible for an overabundance of appendix cases. I thank you.

Dr. R. B. Harkness, Lake City:

I am very sorry I didn't get in in time to hear this essay. Two or three points made I would like to discuss very briefly.

In the first place, it seems trite to condemn purgatives before an assembly of men who are surgically minded, but the majority of you, I

imagine, come in contact with the rural population and know this practice is still prevalent in cases having abdominal pain. In a good many years of experience I think I can say without fear of infringing on the truth that I can number on the fingers of one hand the appendices operated by me that have been ruptured before coming to operation where purgatives had not been administered. In recent years we have thought it worth while to do some teaching among the laity, along this very important line. For instance, after a case has been drained, I never neglect to impress on the minds of the family the necessity of withholding purgatives in this individual, because the presence of adhesions necessarily does tend to produce intestinal obstructions, especially if purgatives are administered.

The matter of drainage I think is another matter along which no definite criterion can be laid down. I think all of us find ourselves getting further and further away from the matter of drainage of the abdomen; I think we should realize that when a drain is left in the abdomen we have more adhesions there, consequently more danger to the subsequent life of the individual.

I judge some reference was made in the essay, a plea for less handling of tissues of the abdominal wall. I do believe that rough handling here, traumatizing the tissue of the abdominal wall, does tend to infection; not that the handling introduces the infection, but simply, as one of the men discussing the paper said, rough handling and demolition of the tissue does lower the resistance of the tissues of the abdominal wall. I know in many cases, border line cases, where I find my own consent to close the peritoneum without drainage, that the insertion of a small strip of rubber tissue in the tissues of the abdominal wall, left there for twenty-four hours to take out the primary wound secretions, does tend to reduce infection in the abdominal wall. I think there is no one point where we need to do more real teaching than in insisting on withholding purgatives in these cases, not alone in the well-defined case, but in any case of abdominal pain.

Dr. J. A. Simmons, Miami:

Just one or two points I want to discuss in this paper of Dr. Moore's. One point is, Dr. Moore in his paper states that when you have a right abdominal pain, rise of pulse rate and temperature, with vomiting, it indicates immediate operation. Of course we all realize immedi-

ate operation for appendicitis is the proper thing when you have made a diagnosis, but I do think at times we are a little too prone to open an abdomen and operate for appendicitis before we have made our diagnosis. It is not all right abdominal pains with rise of temperature and vomiting that are appendicitis. Often we will have a renal condition, renal calculi, calculus in the ureter; we operate for appendicitis, open the abdomen, find the appendix practically normal. I want to stress right there, when you have made a preoperative diagnosis of appendicitis, opened the abdomen and found the appendix normal, which doesn't explain your symptoms, always search for a diverticulum. If you don't find a diverticulum examine in the posterior abdominal wall, see if you don't possibly locate a stone in the ureter. On that point, in making your diagnosis, if in making the blood count you get a high leukocyte count, of course that in a way rules out renal calculi. Now, about drainage. Of course in all cases of appendicitis where we have a perforating type, we know drainage is the proper thing, but a great many times on opening the abdomen you have a serious exudate in the abdomen, which looks like pus. If that appendix is not leaking, if you haven't a rent in the lumen of the appendix, I make it a rule not to drain; of course if you have a rupture in the appendix the point is to drain.

Another point Dr. Moore made was the infrequency of appendicitis in the colored race. It is true, why I don't know. I have had a few cases, three recently, one in a negro man with a ruptured appendix, about thirty-six hours after the onset; another case who had only been ill about twenty-four hours had a gangrenous appendix not ruptured. We have it, but not so frequent as in the white race, but I am unable to explain the reason.

As to Dr. Moore's theory in the tooth brush being a causative factor in appendicitis, I think he is entirely wrong, as I cannot see where the tooth brush could have any bearing on the development of appendicitis.

Dr. Alfred Moore, Miami, (closing):

I enjoyed the discussion. I want to thank you for the free discussion of this subject. One gentleman said that the negro is more frequently or at least equally subject to appendicitis. That has not been my experience and I have talked to quite a number who have had considerable experience with the negro and they have found appendicitis rare in the black race. Another

point brought out was the giving of morphine. I believe, gentlemen, that we are running a risk in giving morphine in appendicitis. You really are masking symptoms at a time when it is imperative to make a correct diagnosis.

A BRIEF DISCUSSION OF ANGIO-NEUROTIC EDEMA, WITH REPORT OF A CASE*

W. S. HUGHLETT, M.D.,
Cocoa.

Definition: To quote Osler, angio-neurotic edema is "an affection characterized by the occurrence of local edematous swellings, more or less limited in extent, and of transient duration. Severe colic is sometimes associated with the outbreak. There is a marked hereditary disposition in the disease. Some cases appear to be due to hyper-susceptibility to certain foods." Bannister, of Chicago, is said to have been the first to record a case. It was formerly said that this honor went to Quincke.

Etiology and Pathology: Angio-neurotic edema evidently is a vasomotor disturbance, resulting in vascular spasm, or in dilatation with transudation of serum; and probably is the result of anaphylaxis. There is a marked family tendency toward the disease. One family referred to by Sajous included twenty-eight cases in five generations, these being about equally divided between male and female. In this series there were fifteen deaths from an acute form. Most frequently the cases are between early youth and middle life, and are those of weak digestion and easily disturbed nervous systems. The most frequent cause of an attack is regarded as being the ingestion of some food that disturbs digestion or gives rise to toxins.

One writer thinks emotional disturbances and cold may play a part in precipitating an attack, and another finds that alcohol does so.

Stelwagon suggests that the gastro-intestinal symptoms may be due in some cases to edematous swelling of the gastric wall.

Lodor believes that the presence in the blood of a lymphagogue in pathologic quantity and rapid rise of lymph pressure produces in areas of lessened resistance a rapid vaso-motor paralysis in such regions.

Symptoms: The swelling usually comes on rather suddenly. The parts most frequently af-

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affected are probably the eyelids and lobes of the ears. The following parts also are among those affected: lips, gums and palate, tongue, larynx, neck, mastoid region, extremities, trunk, stomach, and genitalia. Osler refers to a case with swelling of the whole arm.

Periodicity in the attacks has been observed. They may be preceded by redness, heat, itching, or urticaria, and almost always are accompanied at least by a feeling of tension in the skin of the affected part.

We may observe vomiting along with the abdominal pain, which is described as colicky in nature. Sajous mentions an account of the observance of cardialgia and hemoglobinuria and an affinity with Raynaud's disease and certain forms of severe purpura.

Charcot, in 1889, first described blue edema, which is regarded as a form of angio-neurotic edema. This usually occurs in connection with hysterical forms of paralysis and is characterized by suddenness of onset and local lowering of temperature. The edema generally affects only one limb and is always at its extremity. This swelling can sometimes be made to disappear and reappear by hypnotism.

Another form of hysterical origin appears in geometric or segmented areas of the skin and is sometimes associated with hysterical disturbances in skin sensation. This form is called the paroxysmal type, and the resulting edema tends to be transitory and often repeated.

Edgeworth differentiates between hysterical types and angio-neurotic edema proper, the other writers quoted grouping the two as one entity.

Sutton says that as a rule but one part is swollen at a time, although in some instances several lesions may appear simultaneously or one after the other.

The swollen skin may be either of normal color, pink, or pale, and may have a normal temperature, or be warmer or cooler than normal. It is somewhat hard and does not pit like ordinary edema, although a slight depression of transitory nature usually may be made by firm pressure. In some cases the swelling is followed by a transient local numbness.

Exceptionally the swelling may last for several months, and in one case was reported to have lasted for over a year.

Diagnosis and Prognosis—Its usually sudden appearance and disappearance; its failure to give

a typical pit upon pressure; the areas likely to be involved; the likelihood of a history of former outbreaks or a family tendency; and in some cases a history of urticaria are good diagnostic points. The association with colic, in many cases, and the absence of other assignable causes for the swelling are other points worthy of consideration.

This affection generally is not serious, there being exceptions, particularly in the case of edema of the glottis or larynx.

Treatment—Among the remedies which have been used in the past are: large doses of strychnine, nitroglycerin used over a long period of time, quinine, saline laxatives, antacids, sodium salicylate, sodium benzoate, salol, arsenic, pilocarpin, ergot, atropin, bromides, calcium lactate, peptone, adrenalin, and adrenal gland.

Probably our most promising field now, with a view to relieving the condition permanently is the study of the anaphylactic reactions of each case, and desensitizing against the troublesome materials.

I shall here report a case of mine.

Mrs. H. is a white woman of 56 years of age, married, and the mother of three children. Her chief complaint was of attacks of pain in the left upper quadrant of the abdomen, and swelling of various parts of the body.

In the family history there have been no cases of a similar nature. Father's family had a strong tubercular history. Mother had diabetes. Mother's father died of cancer at the base of the brain. Mother's family had a history of tendency to heart failure. No lues in the family. Father died of tuberculosis at 57. Mother died of pulmonary hemorrhage at 54. One brother and one sister died of tuberculosis. One brother died of heart failure, and one of carcinoma of the nipple. One brother living and well. One sister living and well.

The patient is a housewife, does some gardening, sleeps well, eats three meals a day, takes no alcohol or tobacco, and has a history of having taken chloral for six weeks, following the death of her mother.

The childhood diseases include chicken pox, measles, mumps, whooping cough, and scarlet fever. At ten years there was a severe attack of typhoid. Following this attack she had a severe cough, which persisted for seven years, causing a suspicion of tuberculosis, and ever since this

attack she has had a weak heart. A glycosuria and malaria have both been present off and on throughout the patient's life. She had bilateral pneumonia at twelve, without sequellae.

The first child was born at twenty-four, the other two at thirty and thirty-three, all three being normal deliveries.

Mrs. H. says she has had low blood pressure ever since she was ten anyway, and probably before then.

Eyestrain after the first delivery has resulted in weak eyes. All teeth were removed at or before the age of seventeen, due to excessive softness and crumbling. There was an occasional attack of tonsillitis during youth. Constipation has always been present.

About ten days after the third delivery the right hand swelled and there was a severe cramping pain in the left upper quadrant. The patient became unconscious. This attack lasted about three days. Since then the condition has gotten worse. Attacks have come from ten days to six weeks apart a large part of the time.

The swelling has affected at different times the ankles, knees, wrists, hands, elbows, shoulders, lips, throat, and about the rectum. The parts most often affected are the throat and hands. The swelling is always unilateral unless about the mouth, throat, or rectum, and is unilateral sometimes when at the rectum.

When I first saw Mrs. H. the attacks were commonly accompanied by coldness of the extremities and great prostration. At times vomiting has been present.

Physical examination reveals little of note except a weak myocardium and formerly a low blood pressure. Laboratory examination has shown at one time during my care a small degree of glycosuria. This condition the patient has been relieving off and on all of her life by diet. An X-ray study made elsewhere about four years ago is reported to have demonstrated a kink at the hepatic flexure.

A course of thyroid and strychnine about the spring of 1925 resulted in raising the blood pressure and diminishing the tendency to numbness and coldness. The attacks of angio-neurotic edema, however, were not halted. The patient had been taking, beside the above, two alophen pills at bedtime almost steadily since 1923. These, as is generally known, contain in each pill

1/80 grain of powdered strychnine, and 1/12 grain of extract of belladonna leaves.

On Dec. 4, 1926, I put Mrs. H. on calcium lactat, 15 grain powders, and whole hormotone tablets, one of each three times a day. In six days the calcium powders were cut to one a day. About the same time we started her on allonal tablets, two when she felt the attack coming on. The allonal succeeded in aborting the attacks or cutting them short, the patient sleeping off the attack, waking without the pain, though with a dizzy feeling. The swelling would subside gradually, though much more promptly than before. There was a steady improvement, and until the day before the present writing (which is on Nov. 9, 1927) there had not been an attack in about six months, despite the fact that the calcium and hormotone were omitted about six months ago. Nov. 8 I found the patient recovering from a mild attack, with the pain but without the swelling.

There is a debatable question as to what caused the improvement in the general condition. It seems to me the logical conclusion is that it was due largely to the calcium, a deficiency in this element evidently being indicated by the early destruction of the teeth, and by the possibly related fact that the disorder started promptly after the birth of a child, a time when a mother is especially prone to be deficient in calcium.

I think it is fair to conclude that the allonal was of definite benefit in allaying attacks.

Summary—Angio-neurotic edema is a disorder evidently caused by some form of toxin or a deficiency in certain body constituents and accompanied by a derangement of the vaso-motor mechanism, and is manifested by transient swellings of various and changeable parts.

There are many remedies suggested, the disorder being refractory. Probably work along the line of anaphylaxis will help to solve the problem of control. Allonal seems to have been of real help in controlling individual attacks in my case.

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ST. VINCENT'S HOSPITAL, JACKSONVILLE—A MODERN INSTITUTION

The land for this new structure was purchased from the Augustus H. King estate. It is located at the southwest corner of Barrs street and St. Johns avenue and extends to the waterfront of the St. Johns river. The plot measures 581x211 feet.

At full capacity the building will accommodate 250 patients' beds. It serves all types of patients, viz., private, semiprivate and indigent. No contagious diseases or violent mental cases are accepted.

This new hospital was made possible by one of the most spectacular drives ever known in this city and probably not duplicated in any other city of a similar size. In a period of four weeks two hundred and fifty-two thousand dollars had been subscribed to a new St. Vincent's Hospital. The doctors holding membership in the Duval County Medical Society donated thirty-eight thousand dollars.

The Sisters of Charity of St. Vincent de Paul made the citizens of Jacksonville the following

proposition: "If the citizens would donate two hundred thousand dollars the Sisters would build, equip and operate a modern hospital of two hundred beds." The amount asked for was exceeded by fifty-two thousand dollars. This total sum of money was subscribed by 226 donors, which is an outstanding feature itself. The Sisters have built and equipped a hospital that far exceeds their promise. No expense has been spared either as to the location, the building or the equipment so that the total investment will approach a million and a half dollars.

A visit to this hospital soon convinces the most exacting of the excellent judgment exercised in the plan of the building. A main building, housing the executives; resident staff; main kitchen; special diet kitchen; serving kitchens; laboratory; X-ray; delivery rooms and operating rooms, render service to two wings, one extending from each end of the main building, with a court between. In this way each source of supply is central and equidistant from patients similarly placed in the two wings. Every patient room is an outside room with a generous provision for both light and air.



ADMINISTRATION WING

The Sisters, composing the executive staff, also the resident staff, have their living quarters in the main building. The student nurses are cared for in two beautiful homes where every preparation has been made for their comfort and entertainment.



LOBBY

The charity in this hospital represents around twenty per cent of its entire service. This charity is not confined to any creed or any boundary line, but limited solely by the availability of a service bed.

The staff organization is as follows:

1. An official staff of seven doctors whose members receive their appointment from the Board of Directors of St. Vincent's Hospital. Their term of office is permanent at the will of the Board.

The officers of this staff are a president, vice-president, secretary-treasurer and the heads of the following departments:

- (a) Medical.
- (b) Surgical.
- (c) Obstetrical.
- (d) Ear, nose and throat.
- (e) Eye.

2. An associate staff whose members receive their appointment from and whose term of office is at the will of the head of the department in which they serve. Their appointment is subject to the approval of the Board of Directors.

3. The auxiliary staff which includes every doctor receiving the privilege of treating patients in the hospital. This privilege is governed by requirements set forth in a set of rules; the recommendation of the official staff and the final approval of the board of directors, all of

which is intended to safeguard the patients treated in this hospital.

The members of the official and associate staff are required to attend the monthly staff meetings. The members of the auxiliary staff are invited and urged to attend.

The separation of patients is carried out by devoting the fifth floor to men only; the fourth floor to maternity cases only; the third floor to women only; the second floor to pediatrics in the west wing, the east wing being set aside for private cases. The first floor in the east wing is also arranged for the use of private patients.

The private patients are all located in the east wing; while the semiprivate, ward and indigent patients are confined to the west wing.

Every bed in the hospital, except in the pediatric section, is a Gatch type of the latest design. The ceiling lights in the wards and rooms all have both high and low lights controlled by a wall switch. With each bed is a modern bedside table. The private rooms are beautifully furnished, special color schemes being carried out in different rooms, also there is a lavatory and toilet or a private bath with each room. The beds have hair mattresses and some rooms have individual telephone service.

The operating department includes three general and four special operating rooms, all of



RECEPTION ROOM

which contain modern equipment; two anaesthetizing rooms; two scrub alcoves; doctors' dressing room, lockers, lavatory, toilet and shower; instrument room with recessed cabinets; a sterilizing room; a room with tubs for soiled linen; rooms for supplies; and a large workroom.



NURSERY

The maternity department has three delivery rooms, a scrub alcove; a sterilizing room; a doctors' rest room, lavatory, toilet and bath and a workroom.

The Roentgen department has a waiting room, an office, a filing room, two dressing rooms, a fluoroscopic and examining room, a dark room for developing films; a consultation and study room; a soundproof transformer room and a lavatory and toilet.

The laboratory comprises one room for bacteriology and pathology; one room for serology and chemistry and an office for the technician. It is conducted by a trained technician and supervised by a member of the staff.

The metabolism and cystoscopic rooms are adjacent to the Roentgen department.

The main kitchen, special diet kitchen, main dining room, and executive offices are on the first floor.

The building is of fireproof construction, steel, brick and stone being used throughout.

Steam is generated in two 150 h. p. "New-Way" high pressure boilers, equipped with feed water heater and steam driven boiler feed pumps, with provision for one additional boiler. These boilers are fired by means of oil burners, with two oil storage tanks, located outside the building, underground, capable of storing about a week's supply of oil.

High-pressure steam is generated to 125 lbs. pressure and is reduced in pressure by means of pressure reducing valves in four successive pressure reductions as follows: 90 lbs. for laundry equipment, 60 lbs. for the sterilizing equipment, 30 lbs. for the kitchen equipment, and 2 lbs. for heating.

All rooms throughout the building are heated by means of a two-pipe vacuum steam system to 70 degrees F., except in the operating rooms and the nursery where a 75 degree temperature is used.

The ventilating system consists of two mechanical exhaust systems; one for serving kitchens, special diet kitchen and main kitchen; the other for toilet rooms, utility rooms, anaesthetizing rooms, and autopsy room. A separate acidproof exhaust fan is used for exhausting fumes from the laboratory.

The drainage system is of extra heavy cast iron. All water and low pressure steam piping is of genuine wrought iron. All piping for medium and high pressure steam is of extra heavy steel. Separate lines are provided for sanitary sewerage and storm water drainage. Adequate hot water has been provided for by the installation of three instantaneous type heat-



LABORATORY

ers, with reserve storage tanks for 6,000 gallons.

Water is supplied by city pressure of 75 lbs. to a 10,000-gallon house tank, located in pent house on the roof, from which water is supplied by gravity throughout the building. In the event that the city pressure falls below 30 lbs., which pressure is necessary to put water in the house tank, an automatic 10 h. p. electrically driven centrifugal pump in the boiler room, which is actuated by a float valve in the house tank, automatically assumes the task of pumping water into the house tank. In the event of failure of the above-mentioned electrically driven pump, one of the boiler feed pumps can be immediately used for pumping water. A complete system of standpipe lines have been provided for

fire protection. Water for the entire hospital is softened by means of two International Filter Company softeners with a capacity of 500 gallons per minute.

High tension current is brought to a transformer vault in the power house, where it is transformed to the standard voltages for light, heat, and power. A complete emergency lighting system is provided at 110 volts, by means of a set of storage batteries. In event of failure of city supplied lighting system the emergency lighting system will be automatically switched in and carry the emergency load for about two hours. The emergency system provides light for the operating rooms, delivery rooms, all corridors and stairways. An audible and visible nurses' calling system has been installed.

Refrigeration is furnished by a refrigeration plant in the power house, with circulating brine piping to all refrigeration in the hospital. Cooled drinking water is circulated throughout the building to utility rooms, serving kitchens and drinking fountains in the corridors. The refrigeration plant can manufacture one ton of ice every 24 hours.

Two sterilizing rooms have been provided—one for the operating section and one for the obstetrical section. Each sterilizing room has been equipped with auxiliary electrical sterilizers. All utility rooms are equipped with instrument and utensil sterilizers. Recessed type combination sterilizing and flushing bed pan washers have been provided in each duty room. Heavy garbage is disposed of by a large incinerator in the power house; light garbage goes to an incinerator in the main building with a trap door on each floor.

The kitchen equipment is largely in monel metal. Cooking will be done by gas ranges and steam kettles. Elevators are dual control, self-levelling type.

WHAT THE STATE COLLEGE FOR WOMEN IS DOING FOR THE PHYSICIANS OF FLORIDA

ALBAN STEWART,

Professor of Bacteriology and Botany in the Florida State College for Women, Tallahassee.

With the rapid advances which have been made in bacteriology, and other sciences closely related to medicine during the past few years, progressive physicians have come to rely more and more upon the laboratory for assistance in

making their diagnoses. While laboratories are usually available in the larger cities, to which a physician can send his material and get a speedy return, this, unfortunately, is not usually the case in towns of moderate size and in villages.

Wherever located, a physician who has a considerable amount of practice, has to have some one to assist him in his office and reception room. Usually this person is a woman.

With the idea in view of making the physician's office assistant of more use to him than to merely meet his patients in his reception room, answer the telephone, and to perform other similar duties, the Florida State College for Women has instituted certain courses of study to prepare some of its young women graduates for physicians' office technicians, in which they are trained to do practically all of the laboratory work, which a physician might require, in a thorough and efficient manner.

The basis for these special courses is a year's work in General Bacteriology, in which a background for the whole subject is acquired. This general course is followed by two special courses, of a year each, in which a very thorough training is given in the particular kinds of laboratory work which a physician needs in his office.

The work covered includes: blood counting, on which alone a half semester's work is spent, so that efficiency is acquired in making all of the different kinds of blood counts. Proficiency is also acquired in the identification of intestinal animal parasites, the isolation and identification of pathogenic intestinal bacteria from feces, Widal tests, the examination of sputums for tuberculosis, diphtheria, the isolation and identification of pathogenic throat organisms, the examination of gonococcus smears, malaria, the making of vaccines, etc. In fact, all of the work which is usually done in an ordinary Board of Health laboratory is covered in a thorough manner, with the exception of such specialized things as Wassermann and Kahn tests, and rabies.

The work has been made as nearly practical as possible by the use of material which has been sent to the State Board of Health for examination, and later turned over to the college for class purposes.

In addition to their work in bacteriology, these young women have had thorough training in chemistry, so that they are well qualified to make the usual qualitative and quantitative examinations of blood, urine, and other body fluids.

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INFANT MORTALITY

The lowest infant mortality rate ever recorded in the state of Florida was put on record last year. This is a great encouragement to those who are endeavoring to build up the greatest asset in any state. If an infant mortality rate is an index to the sanitary conditions in the state of Florida, we are getting better all the time. The infant mortality rate does not represent a low figure in the number of deaths of babies but represents the number of deaths of infants under one year of age per thousand births reported. An infant mortality rate, therefore, is often used as a measuring unit in connection with success or failure to protect the health of the people.

According to the figures just compiled, the infant mortality rate in Florida last year was 68 as compared with 75 for the previous year.

The infant mortality rate among the white population was 56 last year as compared with 62

for the previous year; colored, 95 last year as compared with 108 for the previous year. Last year's record of 68 is the lowest infant mortality rate ever put on record in the history of this state. The rate of 56 last year is also the lowest ever put on record for the white population. The next lowest was in 1925 when the rate went down to 61. The highest rate was in 1918 when 91 was recorded.

DEATHS UNDER 1 YEAR AND INFANT MORTALITY RATES, BY COLOR, 1926-1927.

YEAR	TOTAL	RATE	WHITE	RATE	COLORED	RATE
1927	2,305	68	1,336	56	967	95
1926	2,614	75	1,545	62	1,069	108

The rate of 95 last year is also the lowest ever recorded for the colored race in this state and is the first time the rate has gone below one hundred. The lowest previous rates were 104 in 1922 and 1925.

The lowest infant mortality rate for the United States registration area between 1915 and 1924

inclusive, which represents a decade, was 67 for the white population which was for the calendar year 1924. The infant mortality rate in Florida for that year was 70. It is too early to secure provisional figures of 1927 infant mortality for the United States, but we feel sure that Florida's rate of 56 for the white population will be a record that will compare favorably with the new rates when they are published.

While it is pleasant to enjoy the realization of certain victories and achievements in the protection of the lives of the precious babies in our state, we must not forget that it is a constant fight and that our best efforts are challenged if the unnecessary loss of lives is to be curtailed. A year ago, a table was published showing the number of deaths from certain diseases. There is a marked improvement in the mortality from several causes; for instance, typhoid fever took a toll of four baby lives under the age of one year as compared with only one in 1927. Diphtheria took a toll of six baby lives as compared with nine for the previous year. This decrease from preventable diseases is encouraging.

DEATHS OF INFANTS UNDER ONE YEAR OF AGE FOR CERTAIN CAUSES, BY COLOR, 1927

CAUSE OF DEATH.	DEATHS, 1927.		
	TOTAL	WHITE	COLORED
Typhoid	4	1	3
Malaria	23	6	17
Smallpox	1	0	1
Measles	5	1	4
Scarlet Fever	1	1	0
Whooping Cough	32	18	14
Diphtheria	9	5	4
Influenza (all forms)	75	37	38
Dysentery	24	12	12
Chickenpox	2	1	1
Tetanus	32	9	23
Syphilis	52	17	35
Septicemia	5	4	1
Rickets	9	4	5
Meningitis	19	15	4
Convulsions	37	10	27
Diarrhea and Enteritis	363	224	139
Intestinal Obstruction	25	15	10
Premature Births	664	445	219
Injury at Birth	128	97	31
Poisoning by Food	3	3	0
Burns	6	3	3
Accidental Mechanical Suffocation	12	8	4
Accidental Drowning	4	2	2

INFANT MORTALITY

DEATHS OF INFANTS UNDER ONE YEAR OF AGE AND RATES PER 1000 LIVING BIRTHS BY COLOR
AND BY COUNTIES—1927.

COUNTIES	TOTAL		WHITE		COLORED	
	Deaths Under 1 Yr.	Rate Per 1000 Births	Deaths Under 1 Yr.	Rate Per 1000 Births	Deaths Under 1 Yr.	Rate Per 1000 Births
State	2,303	68	1,336	56	967	95
Alachua	58	75	26	59	32	95
Baker	15	88	8	66	7	140
Bay	25	73	16	67	9	87
Bradford	9	40	8	43	1	28
Brevard	21	73	10	53	11	113
Broward	35	72	15	44	20	138
Calhoun	10	51	9	58	1	23
Charlotte	9	106	5	70	4	286
Citrus	5	42	2	30	3	56
Clay	9	57	7	59	2	50
Collier	2	77	2	77	0	0
Columbia	29	71	16	64	13	82
Dade	226	71	122	53	104	116
DeSoto	27	113	20	107	7	132
Dixie	0	0	0	0	0	0
Duval	242	66	128	52	114	98
Escambia	95	79	66	68	29	123
Flagler	0	0	0	0	0	0
Franklin	6	54	3	54	3	54
Gadsden	51	79	21	72	30	84
Gilchrist	4	50	3	50	1	50
Glades	3	56	3	59	0	0
Gulf	4	47	3	48	1	42
Hamilton	16	70	5	39	11	109
Hardee	19	63	17	62	2	71
Hendry	4	77	4	89	0	0
Hernando	7	51	4	40	3	81
Highlands	16	63	8	40	8	151
Hillsboro	220	62	156	53	64	103
Holmes	14	50	13	50	1	48
Indian River.....	12	61	4	31	8	123
Jackson	58	63	31	58	27	70
Jefferson	30	79	5	55	25	86
Lafayette	6	52	5	50	1	71
Lake	31	59	14	36	17	123
Lee	23	61	13	46	10	112
Leon	31	59	7	39	24	70
Levy	22	80	15	86	7	70
Liberty	5	47	4	58	1	26
Madison	30	74	14	86	16	66
Manatee	40	71	26	68	14	79
Marion	38	59	22	67	16	50
Martin	6	51	2	26	4	98
Monroe	29	88	19	74	10	141
Nassau	14	63	8	59	6	69
Okaloosa	11	39	11	43	0	0
Okeechobee	4	42	4	67	0	0
Orange	103	86	60	67	43	142
Osceola	17	81	9	64	8	116
Palm Beach.....	79	78	41	59	38	119
Pasco	18	63	14	59	4	82
Pinellas	89	66	55	54	34	103
Polk	102	59	66	49	36	95
Putnam	49	108	15	62	34	160
St. Johns	32	84	20	77	12	98
St. Lucie.....	10	50	7	53	3	42
Santa Rosa.....	18	59	15	60	3	53
Sarasota	17	49	13	45	4	71
Seminole	37	80	13	55	24	107
Sumter	7	28	5	29	2	25
Suwannee	31	78	12	44	19	148
Taylor	13	57	9	57	4	59
Union	8	60	7	76	1	24
Volusia	49	63	34	63	15	61
Wakulla	10	70	5	64	5	78
Walton	28	80	22	80	6	80
Washington	15	53	10	50	5	61

NEWS ITEMS

The Hillsboro County Medical Society on May 15th tendered a testimonial dinner to Dr. E. C. Levy, former health officer of Tampa, at the Plaza Cafe. The dinner was largely attended. Dr. J. H. Mills was the first speaker and gave a short history of Dr. Levy's work as a sanitarian. During Dr. Levy's stay in Tampa, he built up one of the best municipal health departments in the country and the members of the Hillsboro County Medical Society took this opportunity of paying their respects to him.

* * *

Dr. J. E. Rawlings of Daytona Beach has been spending some months doing postgraduate work in Vienna. He expects to return to the United States in July.

* * *

The graduating exercises of the Riverside Hospital Training School for Nurses, Jacksonville, were held May 31st. Diplomas were presented by Dr. H. A. Peyton. The exercises were followed by a dance at the Nurses' Home. The following young ladies received diplomas:

Helen de Montmollin,
Lulu Rawles,
Maura Bell Jeffreys,
Carolyn Roberts,
Lylah Murray Scarborough,
Verna Doulware,
Annie Houskoun,
Ruth Ashton,
Mary Casey,
Ella Mae Long.

* * *

The Suwannee River Medical Society met in Madison, Friday, April 13th. Dr. T. S. Anderson of Live Oak presided over the meeting. Drs. George O. Davis and D. H. Yates of Madison read interesting papers. The following members were present: T. H. Bates, R. B. Harkness, P. C. Farnell, L. M. Anderson, Herbert Caldwell, J. D. Gable, J. H. Dyer and L. J. Arnold, Lake City; T. S. Anderson and H. M. Strickland, Live Oak; Eustace Long, George O. Davis, A. L. Blalock, D. H. Yates and B. F. Hamrick, Madison; J. C. Ellis, and R. J. Green, Perry; R. E. Dicks, Dowling Park; J. P. Kinsey, Pinetta; J. R. Bruce, Jasper.

* * *

Dr. F. A. Copp of Jacksonville, has associated himself with Dr. E. T. Sellers in the practice of urology, with offices in the St. James Building.

Dr. Jack Halton who for twenty-four years practiced in Sarasota has located in Jacksonville with offices in the Professional Building. Dr. Halton will limit his practice to diseases of the anus and rectum. He is a Fellow of the American Proctological Society and has had much special work in his chosen specialty.

* * *

Dr. C. W. Bartlett was recently appointed City Health Officer of Tampa. He is a graduate of the University of Maryland and has a wide experience in the handling of tropical sanitary problems. He served with the United States Public Health Service for some years in the southern United States and Cuba.

W. P. McKEE

Dr. W. P. McKee of Eustis died April 21st. Dr. McKee has been practicing in Eustis since 1896. He leaves a widow and one son, William McKee of Chicago.

The following Associated Press dispatch will be of much interest to the medical profession of Florida:

"Steps to carry out the provisions of a 1927 legislative act for the establishment of a state tuberculosis sanatorium in Florida have been taken by Governor Martin, it was announced.

"The governor has named D. B. McKay of Tampa, newspaper publisher and mayor of that city; Lewis M. Lively, Tallahassee business man, and John L. Edwards, of Ocala, as the three members of the state tuberculosis board created to conduct a survey of the state to determine the most suitable location for erection of the proposed sanatorium.

"The Board just named will meet at the state capitol shortly and select a chairman, after which the survey for location of the sanatorium is to be made.

"The act appropriates \$200,000 for establishment and maintenance of the sanatorium."

* * *

Dr. Frederick J. Waas, president of the Florida Medical Association, recently attended the meeting of the Florida East Coast Medical Association held in Miami.

* * *

The regular monthly meeting of the St. Johns County Medical Society was held in St. Augustine, Monday, May 21st, at the Matanzas Grill.

Drs. Frederick Waas, Shaler Richardson and Stewart G. Thompson of Jacksonville were guests of the society. Plans were discussed for the next annual meeting of the Florida Medical Association which is to be held in St. Augustine. The Ponce de Leon and Mcazar hotels will remain open to accommodate the members of the state association during the meeting.

* * *

The quarterly meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society was held in the Masonic Temple building, Quincy, May 10th. The following scientific program was presented:

"Difficult Obstetrical Cases," Albert R. Sheldon, Highland Park, Ill.

"Some Remarks on Cancer with Report of Case of Colloid Cancer of the Transverse Colon," A. D. Little, Thomasville, Ga.

"Practical Management of Malaria," J. G. Gainey, Quincy.

"Myxo Sarcoma, with Report of Case," R. F. Godard, Quincy.

"Excessive Vomiting of Pregnancy," J. B. Brinson, Monticello.

Following the scientific program, the members, wives and friends were taken to Burmah Springs where Dr. J. C. Davis entertained at a barbecue supper.

* * *

Dr. C. Omer West of Jacksonville sailed on May 5th for Europe where he will spend the summer studying his specialty.

* * *

Dr. A. F. Thomas, formerly of Sanford, is now located in Titusville.

* * *

At the last regular meeting of the Palm Beach County Medical Society, Dr. W. O. Arnold of West Palm Beach read a paper on "Tuberculosis of the Bones and Joints."

* * *

The graduating exercises of the St. Luke's Hospital Training School for nurses, Jacksonville, was held at the Morocco Temple, May 25th.

The following young ladies received diplomas:
Lillie Von Harten, Ernestine Wittmeyer,

Elizabeth Casey, Harriett Pushaw,
Grace Jones, Mildred Black,
Nellie Deard, Frances Black.

* * *

Dr. James L. Estes of Tampa is spending some time in the clinics of Atlanta and Chicago.

* * *

Dr. J. C. Coker of Arcadia died of tuberculosis at Tucson, Arizona, on April 19th.

* * *

The annual meeting of the American Association for the Study of Goiter will be held in Denver, Colorado, June 18th-20th, 1928.

* * *

Dr. Joseph Halton of Sarasota wishes to correct the following statement which appeared in the Tampa Tribune on April 24th:

"Miss Congo, last of living gorillas in captivity, and one of the few females of the species ever captured, died at the estate of John Ringling, the circus owner, at Sarasota, according to information reaching here. The animal was valued at more than \$150,000 and was captured by Ben Burbridge, Jacksonville, explorer and big game hunter. A physician's autopsy over the body of the dead gorilla disclosed what were termed some of the most 'startling developments in the history of man,' in that the inner parts of the animal were said to resemble minutely those of a human girl of 14 years."

Dr. Halton states that he has done eleven autopsies on orang-outangs, chimpanzees and gorillas. Nine deaths, he finds, have been due to pulmonary tuberculosis, and two to ilio colitis, one of which was the gorilla mentioned in the newspaper statement above.

* * *

The graduating exercises of the Gordon Keller Memorial Training School for Nurses of the Tampa Municipal Hospital were held May 16th at the City Auditorium, Tampa. This is the first class of nurses to graduate from Tampa's new hospital. A dance and dinner were given the nurses at the Tampa Yacht and Country Club following the graduating exercises.

(Continued on page 636)

J. K. ATTWOOD, *Pharmacist*

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MEETINGS						Dues Paid.
County Society	Secretary	Date	Time	Place	Luncheon?	
Alachua	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	D. M. Adams, M.D., Panama City.					71%
Bradford	Seeber King, M.D., Lake Butler.					
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		
Broward	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	
Columbia.....	P. C. Farnell, M.D., Lake City.	1st Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	7%
DeSoto-Hardee-Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	70%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Arnold-Edwards Auditorium	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton	R. A. Barnett, M.D., White Springs.					
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	27%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden-Liberty-Wakulla-Jefferson.....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	
Monroe	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Monterey Hotel	Yes.	23%
Pasco-Hernando-Citrus.....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	40%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	
Polk	Geo. C. Overstreet, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.					100%
St. Johns	J. M. Irwin, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeechobee-Indian River-Martin.....	C. L. Davis, M.D., Okeechobee.					10%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					70%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	R. L. Miller, M.D., DeLand.	2nd Thursday	7:00 P.M.	Hotel	Yes.	100%

At the regular meeting of the Pinellas County Medical Society held May 25th, the following program was rendered: "Report of Three Cases of Berger's Disease with Demonstration of Patient," L. M. Gable, St. Petersburg; "Vincent's Infection," R. H. Knowlton, St. Petersburg.

* * *

Graduating exercises of the St. Vincent's Hospital Training School for Nurses, of Jacksonville, were held at the St. Paul's Auditorium, June 7th. Dr. John E. Boyd, president of staff, delivered the graduation address. The following young ladies received diplomas: Grace Davison, Elizabeth de Decker, Susan M. Fields, and Ethel Wood.

* * *

Friends of Dr. F. A. Brink, director of the Bureau of Communicable Diseases of the State Board of Health, Jacksonville, will learn with regret of the death of his father, Mr. E. A. Brink, at his home in Mecking, South Dakota, May 20th, age 78.

* * *

The following resolutions in regard to the death of Dr. W. Herbert Adams of Jacksonville were adopted at the April meeting of the Duval County Medical Society:

Resolved—That the Duval County Medical Society sincerely bemoans the untimely death of Doctor W. Herbert Adams, one of the most useful, talented and beloved members of the society.

That: In his death the medical profession of Florida has lost a loyal counselor, his patients a sympathetic and skilled physician, his community a useful and trusted citizen. Endowed with rare qualities of mind and soul he added to these gifts a wealth of acquired knowledge and skill which for many years has kept him in the van of medical progress. Uncompromising in his loyalty to the principles of medical ethics, staunch in his convictions, charitable in his criticisms and skilled as a physician he won for himself the love, respect and admiration of the members of the society.

That: In testimony of our regard for him as a friend, a man, and a physician, a copy of these resolutions be spread on the minutes of the society and a copy sent his bereaved widow.

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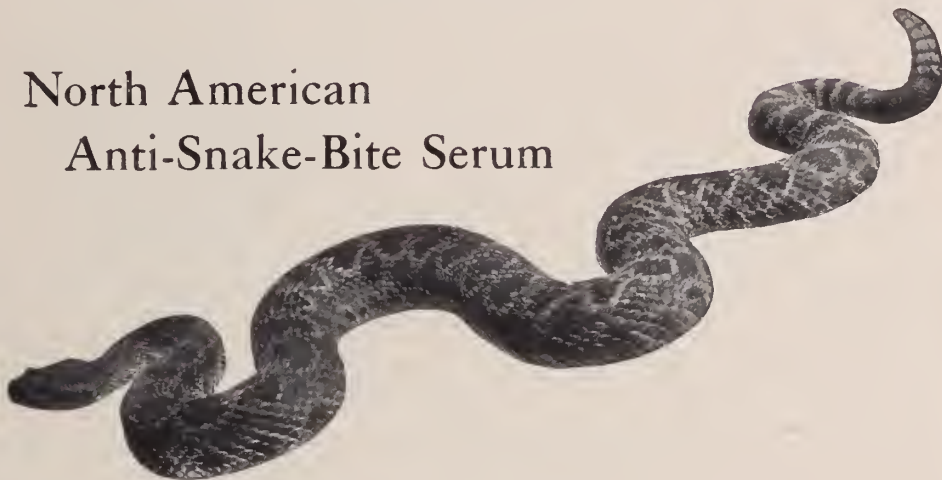
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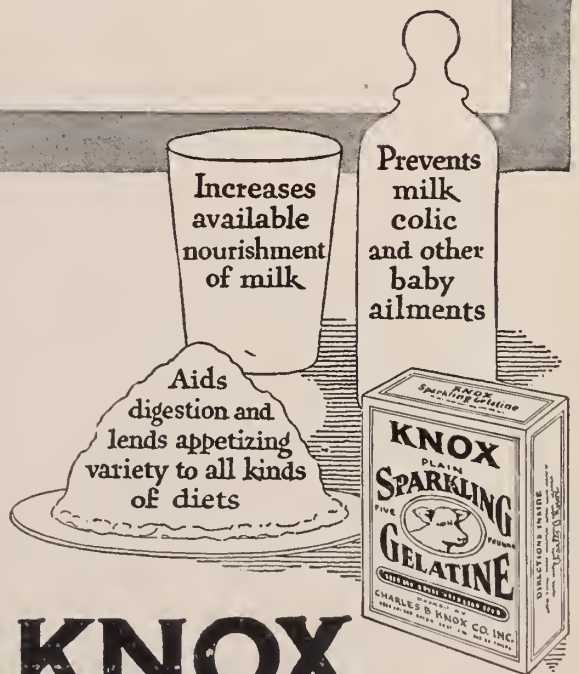
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